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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

ESTABLISHED IN 1872

Vol. LXXV. No. 4 NEW YORK AND CHICAGO, JULY 27, 1922 Per Annum, $4.00 Single Copy, 10 Cents

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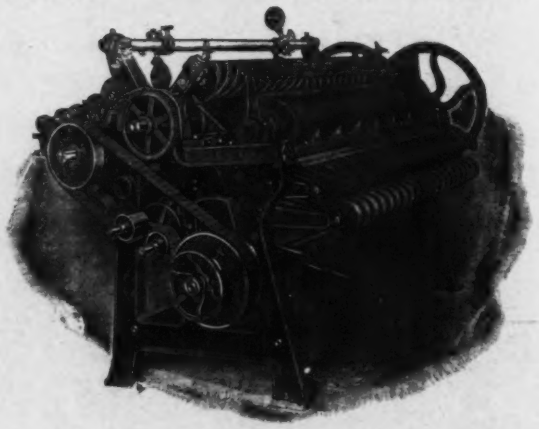
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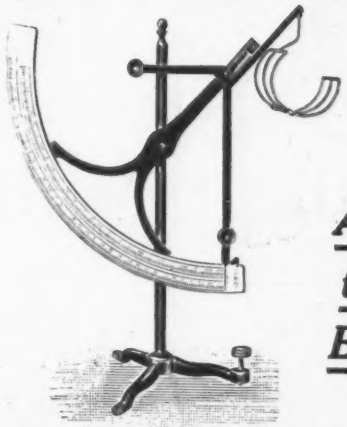

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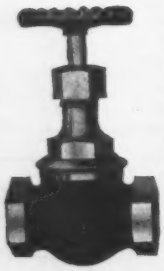

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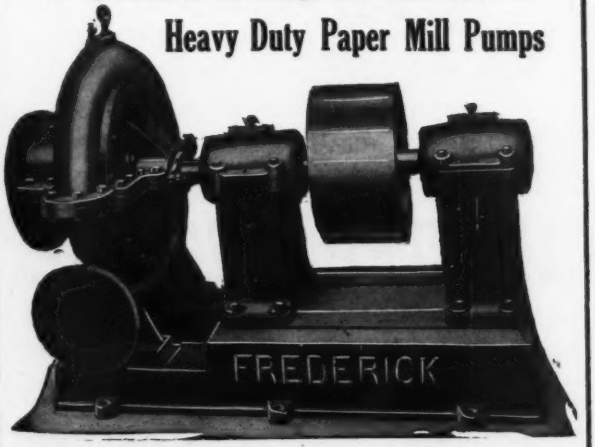

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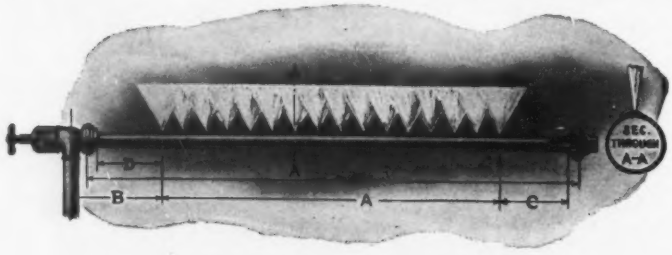

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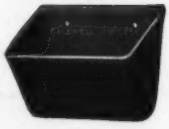

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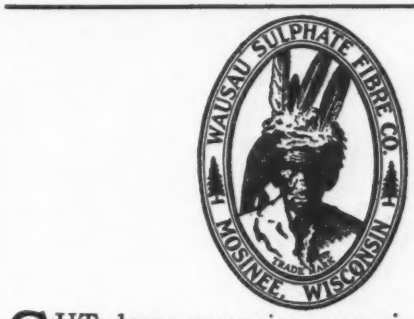

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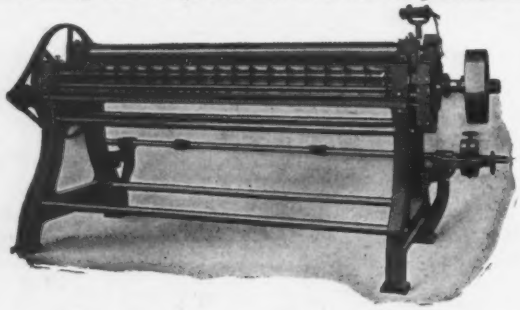

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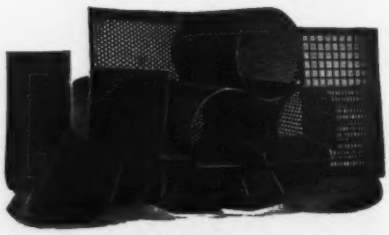

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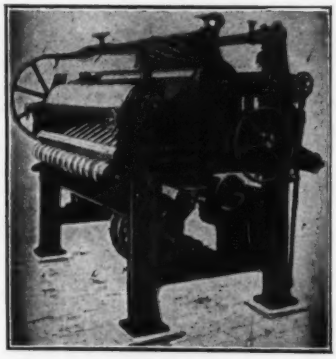

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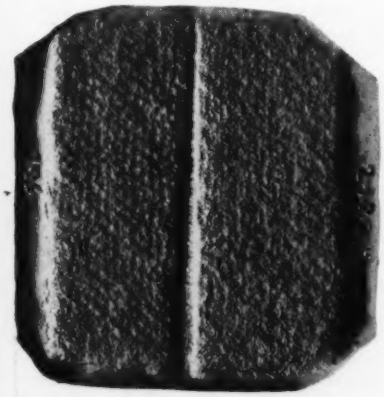

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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

FIFTY-FIRST YEAR

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PRODUCTION OF NEWS PRINT DURING THE MONTH OF JUNE

According to Statistics Just Issued by the Federal Trade Commission the Increase for June of This Year Over June, 1921, for Both Total News Print and Standard News Amounted to About 47 Per Cent—The Production for June of This Year, However, Fell Below the Production for June, 1920, by Two Per Cent for Total News Print and One Per Cent for Standard News.

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1922.—The following is a tabulation of the reports received by the Federal Trade Commission from domestic manufacturers of news print paper, from jobbers buying and selling news print paper, and from publishers using news print paper. Import and export statistics of the Department of Commerce are also included in the review. Whenever possible the figures for 1922 are compared with those for the corresponding period of 1921, 1920, 1919 and 1918.

The figures which follow show the results of the Commission's tabulation for June 1918 to 1922, inclusive:

	Number of mills	Stocks on hand 1st of month Net tons	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
Total Newsprint:					
June, 1922	82	24,781	127,230	128,644	23,367
June, 1921	92	31,198	86,770	91,339	26,629
June, 1920	91	22,823	130,380	129,213	23,990
June, 1919	74	27,084	114,896	115,865	26,115
June, 1918	66	26,122	107,228	107,189	26,161
Total (6 mos.), 1922	..	23,935	690,142	690,709	23,367
Total (6 mos.), 1921	..	24,763	615,448	613,582	26,629
Total (6 mos.), 1920	..	15,369	759,624	751,003	23,990
Total (6 mos.), 1919	..	19,408	671,141	664,434	26,115
Total (6 mos.), 1918	..	31,713	634,854	640,406	26,161
Standard News (Included in Total Newsprint):					
June, 1922	69	19,712	117,473	119,107	18,078
June, 1921	72	26,955	79,769	84,663	22,061
June, 1920	77	20,159	119,016	118,199	20,976
June, 1919	53	21,837	100,965	102,779	20,023
June, 1918	50	18,378	98,248	96,814	19,812
Total (6 mos.), 1922	..	19,607	643,019	644,548	18,078
Total (6 mos.), 1921	..	19,573	565,582	563,094	22,061
Total (6 mos.), 1920	..	12,338	697,290	688,652	20,976
Total (6 mos.), 1919	..	15,656	609,325	604,959	20,023
Total (6 mos.), 1918	..	26,482	570,138	576,808	19,812

Note—Above figures for total news print do not include hanging paper.

The average production of total news print and standard news, based upon the total combined production for the years 1917 to 1921, inclusive, amounted to 114,440 tons of total news print and 103,688 tons of standard news, for a period corresponding to June. The actual production for June, 1922, amounted to 127,230 tons of total news print and 117,473 tons of standard news, which, for total news print was 11 per cent above the average for the five year period and for standard news 13 per cent. above the average.

The production of news print for June, 1922, compared with June, 1921, shows an increase, amounting to about 47 per cent for both total news print and standard news.

The production for June, 1922, compared with June, 1920, shows a decrease of 2 per cent for total news print and 1 per cent for standards news.

The production for June, 1922, compared with June, 1919, shows an increase of 11 per cent for total news print and 16 per cent for standard news.

The production for June, 1922, compared with June, 1918, shows an increase of 19 per cent for total news print and 20 per cent for standard news.

Mill stocks of both news print and standard news decreased during June, 1922.

Loss of Production

The following tabulation shows idle machine time reported to the Commission for the month of June, 1922. This does not include mills shut down during the entire month:

Reasons	Number of Machines	Hours Idle
Lack of orders	16	916
Repairs	4	351
Other reasons	8	252

Jobbers' Tonnage

The following tabulation shows the news print tonnage reported by jobbers during the month of June, 1922, compared with June, 1921, 1920, 1919 and 1918, together with commitments to buy and sell:

	On hand first of month Net tons	Received during month Net tons	Shipped during month Net tons	On hand end of month Net tons	Commitments to buy Net tons	Commitments to sell Net tons
Rolls, June, 1922	1,467	10,761	10,854	1,374	23,182	23,453
Rolls, June, 1921	2,380	7,355	8,148	1,587	32,847	34,865
Rolls, June, 1920	1,945	6,560	6,002	2,503	30,385	33,182
Rolls, June, 1919	2,032	4,275	3,868	3,339	38,628	47,122
Rolls, June, 1918	3,012	2,431	2,460	2,983	45,370	46,326
Sheets, June, 1922	3,971	2,829	2,940	3,860	2,708	1,891
Sheets, June, 1921	3,818	2,814	2,599	4,033	2,232	1,473
Sheets, June, 1920	2,630	3,197	3,013	2,814	4,729	3,295
Sheets, June, 1919	6,579	2,504	2,841	6,242	3,151	2,302
Sheets, June, 1918	6,652	2,860	3,051	6,461	7,023	5,736
Total News Print:						
June, 1922	5,438	13,590	13,794	5,234	25,890	25,344
June, 1921	6,198	10,169	10,747	5,620	35,079	36,338
June, 1920	4,575	9,757	9,015	5,317	35,114	36,477
June, 1919	9,511	6,779	6,709	9,581	41,779	49,424
June, 1918	9,664	5,291	5,511	9,444	52,393	52,062

Stocks of rolls in the hands of jobbers at the end of June were 93 tons less than the stocks in the hands of the same jobbers at the beginning of the month. Stocks of sheets were 111 tons less at the end of June than at the beginning of the month. The net decrease in the total stocks of news print in the hands of jobbers at the end of June amounted to 204 tons.

Commitments to sell roll news were 271 tons greater than commitments to buy. Commitments to sell sheet news were 817 tons less than commitments to buy. Total commitments to sell both roll and sheets were 546 tons less than commitments to buy.

Publishers' Tonnage

Monthly tonnage reports from 678 (a) of the most important newspaper publishing concerns and associations grouped according to the principal business sections of the United States, together with a separate tabulation for agricultural publications show the following results for June, 1922:

Location of publishers (b)	Number of concerns	On hand first of month	Received during month	Used and sold during month	On hand end of month	In transit end of month
New England	79	15,130	18,163	17,146	16,147	2,281
Eastern States	179	46,718	64,219	61,298	49,639	10,566
Northern States	133	37,344	40,003	37,215	40,132	9,052
Southern States	78	8,795	9,962	9,692	9,065	2,024
Middle West	151	25,109	29,516	26,615	28,010	4,732
Pacific Coast	31	11,216	20,909	14,927	17,198	1,796
Farm papers (c)	27	6,131	1,377	1,314	6,194	195
Total	678	150,443	184,149	168,207	166,385	30,646

(a) This number represents a much larger number of publications.
(b) *New England* includes Maine, Connecticut, Massachusetts, New Hampshire, Rhode Island and Vermont. The *Eastern States* include Delaware, the District of Columbia, Maryland, New Jersey, New York and Pennsylvania. The *Northern States* include Illinois, Indiana, Michigan and Ohio. The *Southern States* include Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia. The *Middle West* includes Arizona, Arkansas, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, Wisconsin and Wyoming. The *Pacific Coast* includes California, Oregon and Washington.
(c) The farm papers for the most part use special grades of news print instead of standard news.

Publishers' stocks increased 15,942 tons during the month. Average daily tonnage used during June was 35 tons less than the average used in May.

Publishers' stocks and transit tonnage on June 30 represented 36 days' supply at the existing rate of consumption.

Publishers' and Jobbers' total stocks and tonnage in transit on June 30 aggregated 202,265 tons.

The domestic consumption of standard news by metropolitan dailies using between one-half and three-fourths of a million tons annually, for June, 1922, when compared with June, 1921, shows

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an increase of 15 per cent and an increase of 16 per cent when compared with June, 1920.

The above metropolitan dailies held 60 per cent of the tonnage on hand at the end of the month.

Average Prices Paid by Publishers

The weighted average price of contract deliveries from domestic mills to publishers during June, 1922, f. o. b. mill, in carload lots, for standard news in rolls was $3.574 per 100 pounds. This weighted average is based upon June deliveries of about 60,000 tons on contract involving a total tonnage of approximately 474,000 tons of undelivered paper manufactured in the United States.

The weighted average contract price based on deliveries from Canadian mills of about 38,000 tons of standard roll news in carload lots f. o. b. mill, in June, 1922, was $3.492 per 100 pounds. This weighted average is based upon the June deliveries on contracts involving about 184,000 tons of undelivered Canadian paper.

The weighted average market price for June, of standard roll news in carload lots f. o. b. mill, based upon domestic purchases totaling about 11,000 tons, was $3.475 per 100 pounds.

Imports and Exports

The imports and exports of printing paper not dutiable (practically all news print) and of wood pulp for the month of May, 1922, compared with the month of May, 1921, were as follows:

	May, 1922 Net tons	May 1921 Net tons
Imports of news print (total)	81,352	44,238
From Canada	73,866	40,189
Germany	2,029	1,669
Norway	630	2,314
Finland	3,464	10
Sweden	1,353	37
Other countries	10	19
Exports of newsprint (total)	2,576	1,854
To Argentina	683	0
Japan	373	0
Cuba	836	1,452
Canada	166	40
Philippine Islands	148	144
Other countries	370	218
Imports of ground wood pulp (total)	11,626	7,072
Imports of chemical wood pulp (total)	51,659	17,501
Unbleached sulphite	20,334	6,112
Bleached sulphite	15,704	4,250
Unbleached Sulphate	15,621	7,139
Bleached sulphate	.....	.....
Exports of domestic wood pulp	2,249	2,622

The imports of news print for May, 1922, were 37,114 tons more than for May, 1921. The exports for May, 1922, were 722 tons more than for May, 1921.

The tonnage to "other countries" under "Exports of News Print" for May, 1922, includes 69 tons to Peru, 65 tons to Mexico, 64 tons to Chile and 59 tons to Columbia.

P. T. Dodge to Go to Europe

Phillip T. Dodge, president of the International Paper Company, and Allen Curtis, vice-president of the company and manager of the Department of Manufactures, will sail for Europe next Tuesday, August 1, on the *Aquitania* to make a two-months' tour of paper making countries abroad and study industrial conditions generally. Mr. Dodge, who is also president of the Mergenthaler Lintoype Machine Company, will visit the company's two large factories in England and Germany. Mr. Dodge himself invented a large part of this machine, of which there are now 45,000 running in no less than forty-three different languages, having perfected over a hundred individual inventions in the linotype.

"Every language known to mankind, with the exception of Chinese," said Mr. Dodge, "may now be printed on the linotype. Recently a machine has been perfected to write the Japanese language. There are slightly more than seven hundred symbols in the alphabet. Negotiations are now being carried on direct with the Japanese government for the installation of these machines throughout the empire."

P. T. Dodge Says News Print Will Be Higher

That the price of news print paper will, undoubtedly, rise above the present quotations of $75 per ton in the near future is the belief of Phillip T. Dodge, president of the International Paper Company. In an interview with THE PAPER TRADE JOURNAL representative, Mr. Dodge stated that the recent increase in news print prices as well as others which may come in the next few months are attributable to the abnormal demands made upon the mills manufacturing print paper and the necessity for providing adequate machinery and equipment to keep abreast of this volume of business.

"Later the price of paper will be lower than present prices," said Mr. Dodge, explaining that this would come about through the further liquidation of manufacturing costs and the securing of cheaper labor, "but ultimately the cost of news print in this country is bound to go up—even above the prices which now exist—and this will continue in direct ratio with the growing scarcity of available pulpwood.

"At the present time," he continued, "every country selling news print, that is still using wood pulp purchased at the recent higher prices, is losing money at the price of $3.50. Competition with Scandinavian countries, where wages are one-third lower than they are in this country, is killing the production of American manufacturers. In the years to come, European countries and Canada will produce the bulk of the news print paper which is used in the United States. Our American mills will be operated more profitably as hydro-electric plants as there will soon be more profit in water power than in paper making.

"We've just started the best paper mill in the world in Canada. Production is gradually being shifted up there. Labor is cheaper, transportation facilities are better and fuel can be more readily obtained. Within the next ten days our fourth machine at the new Three Rivers mill will be in operation. This mill, situated at the junction of the St. Maurice and St. Lawrence rivers, with docks on the latter, is readily accessible by water, to a depth of 30 feet. Not only may the finished paper be shipped direct from the mill in this manner, but tank steamers laden with fuel oil may deliver their cargoes at the same point."

Buys Tonawanda Board & Paper Plant

BUFFALO, N. Y., July 24, 1922.—A company headed by Maurice W. Simon, who for many years prior to 1919, when the control passed into the hands of the Beaver Companies, was secretary and general manager of the Tonawanda Board and Paper Company of Tonawanda, N. Y., has purchased the entire plant of the Tonawanda Board and Paper Company from the Beaver Companies and expects to start operations in the very near future.

None of the former interests in the old Tonawanda Board and Paper Company except Mr. Simon will be connected in any way with the new enterprise. It is expected that the mill will be started in operation under a new name in the near future, producing a wide variety of box board products, boards for corrugating, pasted boards, sheet lining, etc., and will as quickly as possible be brought up to its full capacity of 150 tons per day.

The mill will be operated under the personal management of Mr. Simon, and his present activities as a dealer will be discontinued.

Paper and Pulp Manufacturers in Massachusetts

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., July 17, 1922.—Massachusetts manufactures more than eleven per cent of the entire output of paper and pulp turned out by the United States according to respective values, the Boston Chamber of Commerce and the Graphic Service Bureau of Boston state in a chart just published to show the need of amalgamation between the Boston Executives' Club and the Boston Chamber of Commerce in order that Massachusetts may better hold her supremacy by better methods of management and administration.

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DEMAND IN PHILADELPHIA IS SHOWING GOOD INCREASE

Even After the Unusual Influences of the Possibilities of Freight Tie-up, Coal Shortage, Etc., Are Discounted, Trade Expansion Is Said to Be Larger Than Was Anticipated at This Time—While There Have Been No Actual Increases in Mill Quotations Prices Are Firm and There Is More or Less Definite Talk of Increases in the Fall—Fine Paper Division of Philadelphia Paper Trade Meets.

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, July 24, 1922.—Discounting influences such as anticipation of freight tie-up, coal shortage, and the keen competition in the printing trade, even by the largest firms which heretofore have had much to say about the importance of maintaining fair prices, the fine paper distributors still find a continuation of the improvement of recent weeks and of all the more remarkable betterment which set in with the beginning of the month, a time that usually is characterized by a recession of the business tide. It is true that the more desirable orders are coming from out of town. But the local consumers of fine papers are running presses at a livelier rate than they have been and, of course, the trade benefits. There is unanimity of opinion that conditions are much better for the season of the year than some time ago it was expected they would be but there is some diversity regarding the permanency of this July end trading. The majority view, however, is that it may confidently be counted on to continue with more or less regularity until next month closes, indeed until the full tide of the fall activity which no one doubts is in store, actually appears. In the round the trade is in a well satisfied mood and the only approach to complaint lies in the fact that collections are much slower than conditions in the money market would seem to justify. It is for this reason perhaps alone that the distributors are not making as large engagements from the mills as their representatives are urging upon them to do. The mill men who have been visiting the trade during the last week, and correspondence from the executives of manufacturing concerns both urge that the distributors place immediately just as large orders as an optimistic view of the future suggests in order to secure assurance of adequate supplies when the real rush starts in and of present price level. While there have been actually no increases in mill quotations, values are very firmly held on all grades and on all sides there is talk more or less definite of increases in the early fall. In the coarse paper markets, too, the same stiffening of quotations has been experienced and while just a little while ago sales particularly of screenings and other low grades and of tissues were inclined to be sluggish they now have become considerably stimulated and almost are active. There is confidence that it is only a matter of a short while before the improvement in the coarse paper line will measure up to that which actually has taken place in the fine.

The week's experience in the paper and rag stock market was merely a repetition of that of the preceding. All the rag stock grades are moving steadily but with no special activity or notable change. All lines of paper stock with the single exception of hard whites are in good demand at the old quotation, but the mills have not yet felt it necessary to advance offerings in order to stimulate supplies. Hard whites are being stored although large quantities of these are not being gathered together.

Fine Paper Division Meets

Entirely satisfactory business conditions were reported in the postponed meeting of the Fine Paper Division of the Philadelphia Paper Trade Association, held on Thursday noon last in the Bourse. But the outstanding matter of importance considered was the report of the special committee headed by George W. Ward of the D. L. Ward Company, and with Leon Beck of the Charles Beck Company, a most active member, on the solution of the long pending problem of handling the small order business. A very definite report on the matter was presented by Chairman Ward, and while there was almost unanimity of opinion in its favor definite action was postponed for the present only, however, pending conferences with the mill men whose co-operation is regarded as essential to the successful carrying out of the program. In a general way it can be said that the trade is desirous of inaugurating such a trade custom with regard to broken lots and small quantity sales as will encourage larger buying. But in carrying out this proposition it is regarded as essential that the paper man's point of view be fully understood by his best customer, the printers, and the present time when there is so much harmony between the two industries following the recent adoption of the agreement regulating sales to the trade and to the consumer, is regarded as being the most auspicious that has presented itself in many years to effect a change which the paper distributors believe will prove to be quite as beneficial to the printers as to themselves.

Approved Plan for Graphic Arts Building

During the week announcement was made of the approval by the National Paper Trade Association of the resolutions adopted by the general Sesqui-Centennial Committee of which Charles W. Beck, Jr., of the Beck Engraving Company, is chairman, and whose paper trade representative is President Arthur B. Sherrill of the local association. When the Sesqui-Centennial agitation began the first suggestion was for the erection of a special press building, but after further discussion it broadened out into the present project of a Graphic Arts Building, comprising all the elements of this industry and thereupon the central committee adopted resolutions for transmittal to both the National organizations and the locals of all the industries interested. Some time ago the Paper Trade Association of Philadelphia adopted the resolutions and forwarded them to the National Association whose approval has just been received by Leon Beck. It is hoped that the American Pulp and Paper Association will also give approval.

Paper House of Penna. to Issue House Organ

The first issue of a house organ called *The Bulletin* of the Paper House of Pennsylvania and issued from its headquarters, 28 N. 6th street, will appear this week. A first page article presents in picture and in story the history of the establishment and growth of the Strathmore Paper Company, for which the Paper House is one of the five Philadelphia distributors and "the thought behind its advertising." In its introductory the Paper House points out that *The Bulletin* will enable it between the appearance of its monthly price list to call attention in a more extended way to matters of interest to paper consumers. While the inside pages are devoted to an exposition of Araby Covers, the Standard Paper Manufacturing Company and other lines the outside and inside cover contain many matters of statistical value and personal interest to both the paper and the printing trades.

Paper Box Men Meet at Harrisburg

Many representatives of all the Philadelphia paper distributors, catering to the paper box trade, participated in the joint convention of the Central and Eastern Divisions held at Harrisburg on Tuesday, Wednesday and Thursday of last week, and then to show their good fellowship organized a baseball team with other supply men and defeated the box makers by a score of 13 to 1. Although not the largest in mere numbers attending, the joint meeting was one of the most interesting held. Usually the sessions are held in Reading, but this time at the invitation of The Penn-Mar Association the box makers came to the capitol of the State. Here they

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were received by the commonwealth through Lieutenant-Governor Edward E. Beidleman, who presented to them the important message that they and all other manufacturers should pay closest attention to all forms of legislation before they were enacted into laws rather than wait until they were acts and then complain. The Lieutenant-Governor's interest in the association by remaining all through the session on Wednesday afternoon when uniform cost accounting was the topic of chief consideration and following the paper by Henry L. Stortz on the subject Governor Beidelman, a corporation lawyer of prominence, evidenced his interest by asking many pointed questions and participating in the dscussion. Mayor George A. Hoverter, of Harrisburg, also made an address of welcome. The following officers were elected to serve for the year: Central Division, S. P. Eby, of the Harrisburg Paper Box Company, chairman; Gedeon R. Kreider, Jr., of Lebanon Paper Box Company, vice chairman; Advisory Board, George O. Slingerland, of the Mechanicville Paper Box Company, Mechanicville, N. Y.; J. Frank Ridenour, of the Hagerstown Bookbinding and Printing Company; Henry L. Stortz, Sr., of Henry Schmidt & Bros., Inc., Philadelphia, and E. P. Franke, of George Franke & Son, Baltimore. Eastern Division, Chas. A. Leroy, of the L. & S. Paper Box Company, chairman.

Important among the papers read during the three days' convention were those by Mr. Stortz on "The Importance of Uniform Cost Finding Methods"; by W. A. Dillman on "Proposed Follow Up and Statistical Service of the Association"; by W. H. Hutt, Deputy Governor of the Federal Reserve Bank of Philadelphia, on "The Federal Reserve System"; and "Salesmanship," by George F. Barber, president of the Barber Industrial Service. Important among the committee reports was that of Henry L. Tay, chairman of the Industrial Relations Committee, by Frank Stone, chairman of the Central Division, and Charles A. Leroy, for Herman M. Hess, chairman of the Eastern Division. National Secretary W. W. Baird presented for the first time the statistics of the industry for 1921. They showed an investment of $71,184,871.86; sales, $104,238,975.94; pay roll, $43,890,490.64; paid for box board, $13,777,636.28; paid for other merchandise, $19,080,675.13; male employees, 18,810; female employees, 32,359, a total of 51,169. The 1920 total employment figures aggregated 59,961, and the 1919, 56,801. Membership in the Central Division, on May 1, 1922, numbered 117, and in the Eastern Division, 72.

General News of the Trade

President George W. Ward, of the D. L. Ward Company, left the city today to attend the meeting at Erie, Pa., of the conference group of manufacturers and distributors which periodically discusses matters of mutual relationship. Mr. Ward returned last week from quite an extensive trip through the State. He reported finding everywhere a very sound and healthful condition of permanent improvement and of increasing activity.

Representatives of the two Philadelphia distributors of the S. D. Warren line of Expressive papers spent part of last week in attendance at the Warren Summer Camp in Cumberland, Maine. Of the Charles Beck Company there were present Sales Manager Frederick Meinecke, and Purchasing Agent Andrew Simon, and of the D. L. Ward Company, John Conradi, Asher Humes and A. J. Clark. William Sharpiess, head of the S. H. Burbank Company and chairman of the Typothetæ Trades Relations Committee, which with the similar committee from the paper trade association recommended the present agreement regarding direct sales, also accompanied the visitors.

J. H. O'Connell Goes With Diana Paper Co.

HARRISVILLE, N. Y., July 24, 1922.—John H. O'Connell, of Kalamazoo, Mich., president of the American Pulp and Paper Mill Superintendents' Association, has accepted the position of efficiency manager of the Diana Paper Company of this town.

British Machinery Firms Combine

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 24, 1922.—Of particular interest to the industry is the news that a combine has been effected between two great English engineering firms for the development of papermaking machinery. These firms are Charles Walmsley & Co., Ltd., Bury, Lancashire, who have manufactured some of the largest papermaking machines installed on this continent, and the famous engineering firm of Armstrong, Whitworth & Co.

The former firm occupies a premier position in the making of paper-manufacturing machinery, while the latter has recently established a hydro-electric department that is securing much business from paper mills. The Walmsley firm has had a waiting list for their machines for years, and the demands have increased as a result of the successful installation of the giant machines which this firm manufactured for the Abitibi Company, of Iroquois Falls. These machines have a width of 232 inches, and are proving most successful in every way. They are the largest in the world.

Under the combination now effected, the firm will have the advantage of the great machine shops and world-wide organization of the Armstrong-Whitworth Company, and will thus be able to speed up production and gather in more business.

The Armstrong-Whitworth Company has a shipbuilding plant at Montreal capable of turning out ships of any size. This plant was very busy during the war, but is now practically idle. It is expected that under the new arrangement use will be made of this plant for the manufacture of paper-making equipment for Canadian mills.

Paper and Pulp Instruction at U. of M.

[FROM OUR REGULAR CORRESPONDENT.]

ORONO, Me., July 24, 1922.—Pulp and paper course students in the summer school of the University of Maine are now in the midst of their studies. Aside from the regular progressive work in class room and pulp and paper laboratories, they had the benefit of three lectures and two mill visits during the past week. The schedule was as follows:

Tuesday, Lecture, Physical Chemistry of Electrolytic Chlorine Cells, B. F. Brann of the University of Maine.

Wednesday, Mill Visit, Penobscot Chemical Fibre Co., Bleached and unbleached Sulphite and Soda Pulp.

Thursday, Lecture, Paper Sizing, by C. H. Champion of the Paper Makers Chemical Company, of Holyoke, Mass.

Friday, Lecture, Technical Control, Hugo Hansen, Eastern Manufacturing Company, So. Brewer, Me.

Saturday Morning, Mill Visit, Eastern Manufacturing Company, Bleached Sulphite Pulp and Fine Writing Papers.

During this week, there will be a lecture on Practical Operation of Electrolytic Cells by C. A. Blodgett of the Eastern Manufacturing Company, and on the Paper Mill Superintendent by Eugene Sullivan of the Orono Pulp and Paper Company. A mill visit to the Advance Bag and Paper Company, sulphate pulp and kraft paper and bags, Howland, Me., was made last Saturday.

Herman Chemical Corp. Completing Building

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, July 24, 1922.—The K. I. Herman Chemical Corporation located at Matteson, Ill., is now putting the finishing touches on its new building. K. I. Herman, president of this recently incorporated firm, is giving the erection of the new plant his personal supervision. In a recent interview with a representative of the PAPER TRADE JOURNAL, Mr. Herman announced that as soon as the plant commenced operation, which would be early this fall, he would make his permanent office at Matteson, where an extensive experimental department is to be opened.

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PAPER DEMAND IN TORONTO SATISFACTORY FOR SEASON

Most Lines Are Reported in Better Request Than Was Anticipated at This Time—Jobbers and Manufacturers of Paper Optimistic Over Improving Commercial Conditions Generally and Expect Considerable Expansion in Demand for Their Particular Lines in the Fall—Mills Making Book, Wrapping, Writing and Tissue Especially Report Orders Coming in Quite Freely.

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont. July 24, 1922.—Although there is a summer lull in the paper trade, most lines report slightly better business than was anticipated. Jobbers in bond and writing papers report a fairly steady demand but the book paper trade is dull from a jobber's standpoint, although the mills are fairly busy. Although the season for catalog printing is approaching the printing trade is dull and business in this direction has not opened up on the scale anticipated. Business conditions generally in Ontario, however, are expected to improve as soon as the holiday season is over and paper dealers confidently expect to share in it. Crop conditions all over Canada are such as to guarantee greatly improved business conditions. In every section of the paper trade, both in jobbing and manufacturing there is a feeling of optimism based on improving commercial conditions. The mills making book, wrapping, writing, tissue and other papers report orders coming in quite freely but distributors complain that their orders are of rather small dimensions. Few big contracts for any line of paper are being made and the same condition prevails to some extent in the mills notwithstanding the fact that orders are coming in steadily in sufficient quantity to bulk fairly large. The news print market in Ontario is active. In this department it is pointed out that the advance in the price of news print by the International Paper Company to $75 per ton for new business, after that company had previously forced a reduction to $70 will have little effect upon Canadian mills, as the majority of the companies are under contract for the balance of the year at $70 per ton. A few spot lots may be sold at the higher figure but the policy of the Canadian mills has been to maintain the $70 basis for the remainder of 1922. When the demand for news print increased earlier in the year there were persistent reports that the mills would insist on a readjustment when the quarter closed, but the mills announced that there was no intention of raising the price. Of course the new contracts for 1923 by the Canadian mills will be influenced by the action of the International Paper Company. In the pulp market the bleached product is still in good demand and kraft has strengthened somewhat. Groundwood is moving freely but at poor prices.

Don Valley Mills Resume Operation

In less than one month from the fire which badly gutted the Don Valley Paper Mills, Toronto, the plant is again in operation. Although the paper machine and other equipment suffered severely from fire and water the rehabilitation of the plant was begun with a large staff of men under the General Manager, Nelson Gain, with the result that production has been resumed in record time. The firm is now running fairly full and is fast catching up with its arrearages of orders.

Dispute Over Abitibi Railway

The granting of a charter to the Abitibi Pulp and Paper Company, Limited, of Iroquois Falls, for the purpose of hauling pulpwood and freight from their timber limits is the subject of a dispute between the Ontario Government and the company. Backed by the commissioners of the T. & N. O. Railway, who claim that the granting of such a privilege will cut down their revenues, the Government is now making efforts to confine the company to hauling its own pulpwood and little else. The company has established its right to a light railway charter and a legal battle is now on to confine the operation of the line to the smallest possible limits. Following a conference between the officials of the company and the Government it was decided that an agreement should be made restricting the company to certain kinds of haulage. It is now stated that while the agreement has been drawn, it is not in as good form as the Government wishes and further conferences are pending. The haulage of the pulpwood by the company, it is said, is at a cost lower by $2 a cord, also, the company will be able to bring in the wood as it needs it, and therefore it would not be necessary to pay high insurance on the "wood pile" storage against fire. Daily supplies could be transported to the mill with a great reduction in cost.

Building Grinders for St. Lawrence Mills

Eight magazine grinders are being manufactured by the Waterous Engine Company, Brantford, Ont., for installation in the new mill at Three Rivers now under construction for the St. Lawrence Paper Mills, Limited. The mill will have both rail and deep water connection to take care of the receipt of pulpwood and the shipment of paper. It is expected that with favorable weather conditions the first of the two news print machines ordered from the Dominion Engineering Works, Montreal, will be in operation by Jan. 1 next.

A. P. Costigan Returns from Mill Visits

A P. Costigan, the Ontario Pulp and Paper Safety Association's engineer, is back at his office in Toronto after a visit of inspection to the pulp and paper mills at Port Arthur, Sault Ste Marie and Dryden, Ont. At Dryden Mr. Costigan presented the shield and flag won by the Dryden Paper Company, Limited, for the best safety record in group A mills in the presence of an enthusiastic gathering, which was presided over by J. B. Beveridge, president of the company. In the course of the meeting Mr. Costigan gave a talk on the work of the association in relation to pulp and paper mills and a prominent employe of the mill received the trophy on behalf of the mill hands.

Ingersoll Paper Box Co. Incorporates

The Ingersoll Cone and Paper Box Company, Limited, has been incorporated with headquarters at Ingersoll, Ont., and with power to engage in a general paper box-making manufacturing business. The capital stock of the company is $50,000 and the provisional directors are: J. M. Rogers, A. H. Richardson, R. A. Skinner, C. C. Cornish and P. F. Heyes, all of Ingersoll.

For Better Printing

With the object of educating consumers of papers and printers along better printing lines, the Wilson-Munroe Company, paper dealers, Toronto, are sending out a series of very attractive mailing pieces along with examples of letterpress effects. The campaign is in charge of W. Brady, secretary of the company, who is skilled as an artist. A mailing piece of Waverly Linen Ledger contains a finely executed sketch of Sir Walter Scott, which is the work of Mr. Brady.

Ruling on Paper Sales Tax

A ruling has been received in Toronto from the Dominion Department of Customs and Excise in regard to the Sales Tax on paper sales, which has hitherto been in doubt. According to the ruling paper jobbers selling paper to printers, with turnover exceeding $10,000 must charge sales tax of two and a quarter per cent. Paper jobbers selling paper to printers with turnover not exceeding $10,000 sales tax of four and a quarter per cent applies.

XUM

Job printers with turnover of $10,000 or less are not entitled to a Sales Tax license.

General News of the Trade

W. D. Gillean, formerly manager of the Canada Paper Company's Toronto office, laid the corner stone of a new Presbyterian Church in Montreal a few days ago. Mr. Gillean is now in the paper mill supply business.

The Toronto paper trade is interested in the candidacy for school trustee in Outremont of Charles P. Tucker, who is widely known in the Canadian paper trade through his connection with Alexander McArthur & Co., Limited, of which he is a director.

Holders of bonds of the Spanish River Pulp and Paper Mills, Limited, are now turning in their script to the head office in Toronto and receiving new bonds which are similar in form and on which provision is made for detaching a sheet of coupons for stock dividends.

J. G. Gibson, secretary of the Spanish River Pulp and Paper Mills, Limited, Toronto, has left with his family to spend his vacation at Keewaytin, Muskoka.

Col. C. H. R. Jones, general manager of the Spanish River Pulp and Paper Mills, was in Toronto for a few days this week. Mr. Jones is now devoting most of his time to the oversight of the company's new paper mill which is being built at Fort William and upon which excellent progress is being made.

B. Branch, manager of the Toronto office in the Royal Bank Building of the Canadian Barking Drum Company, has returned to Toronto after a motor trip through Maine.

C. E. French, of the sales staff of the Howard-Smith Toronto office has returned to the city after spending his holidays in the Adirondacks.

To Show Folding Box Unit

BOSTON, Mass, July 24, 1922.—At the Second Educational Graphic Art Exposition to be held in Mechanics Building, at Boston, August 28 to September 2, The George E. Crosby Company, of Boston, will exhibit an entire Folding Box Manufacturing Unit.

This unit, consisting of a 5-0 two color Miehle printing press, Babcock cylinder cutter and creaser, Specialty automatic glueing machine, Saxmeyer Bundle Tyer, and Economy baler, will manufacture from the sheeted Baird & Bartless cardboard a commercial order of folding boxes under actual shop conditions, of two million boxes to be delivered from this unit during the week of the Exposition, to a large soap company in Cambridge.

The increased demand for folding boxes has made this branch of the industry a very necessary addition to the printing trades, and a study of various packaged goods which have been placed before the buying public will show that the very highest grade of printing is required to make folding box manufacture successful.

The exhibit will be so arranged that visitors will have an opportunity to see the process of making folding boxes from the time the paper is received from the mill until the finished product is packed for shipping. The work will be under the direction of Frank Corcoran, manager of the George E. Crosby Company Box Department, and he or his assistants will be glad to answer any inquiries relating to this feature of the Exposition.

Numerous Paper Bids Coming In

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., July 26, 1922.—Officials of the Joint Congressional Committee on Printing state that they have already received quite a number of paper bids for the opening to be held on July 31. The contracts awarded at this opening are for furnishing paper for the Government Printing Office for a period of six months beginning on September 1.

Paper Business in Boston Improving

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., July 27, 1922.—Because of the large orders which have been received by paper mills, among them being several Massachusetts concerns, the report has been circulated among the paper houses in this city that there will be an advance in price before the fall buying season starts.

Many of the Boston merchants report that their customers are not buying any more supplies than they are obliged to because of the tightening up of credit in all lines of business and in the various industries. Some large orders are reported by several of the houses but these orders have been given at this time only because of the fact that supplies on hand have given out and the firms have been obliged to stock up again. Because of the fact that same of the mills have advanced their prices of certain grades of paper, there is now a bigger demand for other makes of the same grades which have not advanced in price as yet.

Elaborate plans are being made in this city for the Second Educational Graphic Arts Exposition to be held in Mechanics' Building on Huntington avenue from August 28 to September 2. Several of the writing paper companies have arranged for exhibits and the exposition will be one of the most interesting ever seen in the Hub. Mr. Jacob Levine, publicity director of the exposition, promises several novel features especially in connection with paper industry and allied industries.

Representatives of the American Writing Paper Company in the city this week visiting the various paper houses commenting on the reopening of three of their firm's mills, said that they believed the prospects for the paper industry in the future are very bright.

Three greaseproof parchment papers of standard quality, manufactured by the Mountain Mill Paper Company whose mills and general offices are at Lee, Mass., are being offered by several Boston paper houses. The papers offered are the Purity grade. "Quality plus"; Ashmere grade, "Equally Fine," and Berkshire grade, "Stands the Test." These papers are used chiefly in the grocery trade and in meat markets as well as by packers in general where a paper is required which is greaseproof.

Because of the extra effort some of the Massachusetts mills and paper manufacturers have made during the past month to get their goods onto the market a like effort has been made by the paper merchants in Boston with the result that the market instead of being the usual dull one during the summer months has shown normal activity and the products of the mills have been kept moving all of the time.

No "Dumping" of Paper from Europe

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1922.—The Customs Service of the Treasury Department which has been making exhaustive studies into the "dumping" on the American market of news print paper, pulp, and kraft paper from German, Canadian and Scandinavian countries has completed its work on all of the investigations except the dumping of news print on the American market from Canada.

Reports which have been in the hands of the customs officials for some time have now been thoroughly analyzed and it has been found that there is no "dumping" on either news print paper, pulp nor kraft paper from Germany nor the Scandinavian countries, nor is there any dumping of either pulp or kraft from Canada. This leaves the customs officials with only one paper case pending and that is as to whether or not there is dumping of news print paper from Canada.

Preliminary reports which are now in the hands of the officials show that there is no such dumping, although no official notification has yet been made on the latter point.

XUM

COAL SHORTAGE BEING FELT BY KALAMAZOO PAPER MILLS

Jacob Kindleberger, President of the Kalamazoo Vegetable Parchment Co. States That But for the Fortunate Delivery of Three Car Loads of Coal on Monday of Last Week His Plant Would Have Been Obliged to Close—Other Mill Hands Also Say Outlook Is Not Satisfactory and See Trouble Ahead—Work Is Started on New Mill of Kalamazoo Vegetable Parchment Co.

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., July 21, 1922.—The first serious indication of impending trouble in Kalamazoo, as result of the nation-wide strike of coal miners and railroad workers, is heralded this week by the announcement that a fuel shortage menaces the paper industry. First among Kalamazoo's manufacturing enterprises and employing between 3,500 and 4,000, the nine paper companies of this city are beginning to take serious note of what the future pertends.

Intimation of the shortage came when Jacob Kindleberger, president of the Kalamazoo Vegetable Parchment Company, stated that but for the fortunate delivery of three cars of coal Monday morning, his immense plant would have been obliged to close down. Mr. Kindleberger added that present deliveries are very unsatisfactory, practically no coal coming in at all, while all the time they are digging to the bottom of the company's reserve supply.

"Much of the coal found in storage is of an inferior quality," said Mr. Kindleberger. "It is full of slate and dirt and burns rapidly, at the same time generating no steam. Coal is being mined for us, in the West Virginia fields, but it is being held up along the Chesapeake & Ohio railroad."

While the Kalamazoo Vegetable Parchment Company is hardest hit of any mill in the valley and must not be taken as an indication of immediate shut-downs in this territory, the executives of most of the local concerns admit that the outlook is anything but satisfactory and that trouble is ahead, unless speedy relief comes. Coal deliveries have slowed up steadily for the past two weeks until now only a few cars a week are being received here.

"We have four to five weeks' coal supply on hand now," said A. E. Curtenius, secretary of the Kalamazoo Paper Company. "Our deliveries are very unsatisfactory and the outlook for the future is anything but satisfactory."

Slow deliveries are reported by Felix Pagenstecher, president of the Bryant Paper Company, "but," he added, "we have five to six weeks' supply in our storage bins. That will help."

"Coal shipments are unreliable and irregular," said A. H. Gilman, vice-president and general manager of the Allied Paper Mills. "We have just a fair supply of fuel on hand at our King, Monarch and Bardeen divisions."

Winship Hodge, manager of the Western Board and Paper Company and R. L. Pease, secretary of the Hawthorne Paper Company, returned much rosier opinions than other mill heads approached. "We have two months' supply of coal ahead and fuel has been coming to us in just the right amounts," said Mr. Hodge, while Mr. Pease added: "All conditions considered, we are sitting very pretty. It is true that contract shipments are low at this time, but we still have fully eight weeks' coal supply on hand."

Business is certain to suffer as result of present unsettled conditions, according to L. W. Sutherland, president of the Sutherland Paper Company. He looks for a slowing up of business this fall and winter. "Coal deliveries are very slow," he said. "We have enough to last another three weeks."

It was impossible to get in direct communication with B. C. Dickinson, president of the Standard Paper Company, or Marrill B. King, president of the Rex Paper Company, so no statement is forthcoming regarding the fuel supply at those two plants.

S. B. Monroe reports that the MacSimBar Paper Company, Otsego, has a fair supply of fuel on hand at this time. Like all other mills, it is hampered by slow shipments.

Start Work on Vegetable Parchment Plant

Work on the new mill for the Kalamazoo Vegetable Parchment Company has started in dead earnest and H. L. Vanderhorst, contractor, has literally an army of men engaged there in numerous ways. The new mill site has beeen staked out and concrete workers are now putting in the piers, foundations and abutments. There is practically no excavating to be done as the basement of this plant will be in reality a first floor, quite as light and airy as any other section of the mill.

In addition to work on the new mill proper, a big storage warehouse is being erected just south of the present Glendale division. This building is of brick and concrete, one story. It is to be 250 feet long by about 60 feet wide. A driveway extends the length of the building. This structure, when completed, will house all kinds of supplies that at present have to be stored in the various divisions of the paper mill. The Kalamazoo Vegetable Parchment is buying many kinds of building material and other supplies in carload lots and proper storage facilities are necessary.

Another building to be started in the near future is the filtering plant. This will be located just west of the present paper mill and will be of concrete, steel and brick.

Hold Tariff Hearings in Grand Rapids

Alleging discrimination in freight rates in favor of the Fox River Valley Mills, the Michigan Paper Mills Traffic Association is conducting hearings in Grand Rapids before Attorney Examiner Hunter, of Washington, of the Interstate Commerce Commission.

Kalamazoo valley and western Michigan mills are interested in this fight, being represented by F. A. Larish and F. J. Daugherty, of Chicago.

It is set forth for the initiation of the hearing that shippers from the Fox River district, Wisconsin, have much the best of it in competition with mills in Michigan, certain sections of Wisconsin and other western states.

The hearings have been in progress for four days and a great deal of expert testimony has been introduced.

Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 26, 1922.—The Purchasing Officer of the Government Printing Office has received the following bids for 20,000 lbs. of Strawboard, 26 x 38—No. 50: R. P. Andrews Paper Company, $48.60 per ton; The C. L. LaBoiteaux Company at $48.30; The Whitaker Paper Company at $52.50; Spaulding and Tewksbury Company at $36.80, $66.70 and $58.10.

Bird & Son have been awarded the contract by the Purchasing Officer of the Government Printing Office for furnishing 8,000 lbs. of 36 x 48 gray pressboard at 9½ cents per pound, bids for which were opened on July 7.

American Writing Starts Riverside Mill

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 24, 1922.—The Riverside No. 2, division mill of the American Writing Paper Company resumed operations today after being shut down for some time. There is no indication at the present time, according to officials of the American Writing Paper Company of the usual mid-summer slump. If business continues as at present for the remainder of the summer months a gain in manufacturing operations will be noted.

XUM

S. D. WARREN CONDUCT SALESMAN'S CAMP IN MAINE

Forty Students and More Than Thirty Post Graduates Attend Third Annual Session of Well Known Paper Company at Westbrook—Hon. Joseph A. Warren, Mill Manager, Makes Address of Welcome and Representatives of the Company and Well Known Distributors of the Warren Lines Make Address on Interesting Topics—Salesmen From All Over the Country in Attendance.

[FROM OUR REGULAR CORRESPONDENT]

WESTBROOK, Me., July 24, 1922.—With 40 students and more than 30 post graduates in attendance, the third annual salesman's camp and school of the S. D. Warren Company was a marked success on the three last days of the week just ended. The program consisted of intensive study of the production and sale of Warren Standard Papers, with discussions and practical demonstrations at the plant. The men were quartered in the Warren Camp at Warren Park, the discussions were held at The Elms, and demonstrations were carried out in the various departments of the mill.

Hon. J. A. Warren Makes Address of Welcome

Hon. Joseph A. Warren, mill manager, gave an address of welcome at the opening session, which he supplemented by an address on the subject of "Why Standardization?" Superintendent Benjamin T. Larrabee of the sulphite department of the Warren Mill spoke on "Making of Standard Pulp" and an address by Superintendent Nelson R. Davis of the paper mill on "Making of Standard Paper" was heard with interest. Addresses were followed by a demonstration in the sulphite and paper making departments of the plant.

In the afternoon, the program was devoted to salesmanship, opening with a discussion of the "Warren Partnership" by W. B. Stevenson, vice-president and secretary of A. Storrs & Bement Company of Boston, followed by talks and comment on problems in connection with various phases of the sales proposition by W. D. Rogers, W. M. Gordon and B. S. Van Wyck of the S. D. Warren Co.

Following the afternoon session, tennis was enjoyed on the Warren Athletic Field and the party autoed to Pine Point early in the evening, where a shore dinner was served and surf bathing enjoyed.

Competitive Salesmanship

Discussion at the first session Friday morning was devoted to the subject of competitive salesmanship, the Warren test sheet and the printing of Warren papers. The principal speakers were: A. H. Seyler of the Alling & Corey Company, of Pittsburgh; G. B. O'Neill of Henry Lindenmeyr & Sons, of New York, and F. E. Wagner of the S. D. Warren Company. The second session of the morning was taken up with a discussion of the "Coating of Standard Paper" by F. A. Verill of the Warren Company and the "Safeguards of Product" were discussed by Harry W. Grant, mechanical engineer; Killey E. Terry, superintendent of power; Edwin Sutermeister, chief chemist; L. P. Parkman, head of the inspecting department, and Almon N. Waterhouse, superintendent of finishing department, all of the S. D. Warren Company.

Friday afternoon, the time was spent in demonstrations of the mill operations involved in coating standard paper and of safeguarding the product. The athletic feature of the day was a baseball game between teams composed of the Cumberland Mills forces and the Salesmen's School at the Warren League Grounds. Dinner was served at the Warren Camps at 7.30 with Roger D. Smith of the S. D. Warren Company, presiding, and members of the school and Warren department heads being present. After dinner talks included a discussion of advertising by W. J. Boardman, vice-president of the George Batten Company and the Warren campaign by F. R. Feland of the same company.

An address by William Sharpless of S. H. Burbank & Co. opened Saturday morning's session, followed by examination and presentation of diplomas.

Students Enrolled for the Course

The following students were enrolled for the course:

Earle R. Wheatty, Sloan Paper Company, Atlanta, Ga.; J. Page Hayden, D. L. Ward Company, Baltimore; Maurice A. Blackmur, Joseph A. Mullen, Paul M. Jones, Samuel Talbot, A. Storrs & Bement Company, Boston; E. A. Hepp, Alling & Corey Company, Buffalo; George L. Armour, Cyril L. Ward, Paper Mills Company, Chicago; Joseph Rowley, Harry Fick, Chicago Paper Company, Chicago; H. J. Winterman, Diem & Wing Paper Company, Cincinnati; W. H. Bancroft, Central Ohio Paper Company, Columbus; E. J. Evers, Beecher, Peck and Lewis, Detroit; Vernon Correll, Henry Lindenmeyr & Sons, Hartford; P. C. Lowe, Midwestern Paper Company, Kansas City; George A. Just, The W. F. Mackie Company, Milwaukee; W. B. Strait, John Leslie Paper Company, Minneapolis; E. W. Taylor, M. A. Vincent, E. B. Wardsworth, Henry Lindenmeyer & Sons, New York City; H. Kenneth Weed and J. Oscar Young, Jr., Alling & Cory Company, New York City; D. C. Barry and T. Thumser, Lasher & Lathrop, Inc., New York City; Harold F. Braun, National Paper & Type Company, New York City; J. F. Hamilton, Field-Hamilton-Smith Paper Company, Omaha; G. Clark and J. Conradi, D. L. Ward Company, Philadelphia; Andrew Simon and F. W. Meinecke, Charles Beck Company, Philadelphia; E. G. Meek, Alling & Cory Paper Company, Pittsburgh; G. H. Tower, C. M. Rice Paper Company, Portland, Me.; Richard M. Harris, Alling & Corey Company, Rochester, N. Y.; J. Igstadter, Zellerbach Paper Company, San Francisco; C. N. Blake, Mack-Elliott Paper Company, St. Louis; G. F. Schall, Beacon Paper Company, St. Louis; H. L. Wucher, Central Ohio Paper Company, Toledo; Perry Hazard, D. L. Ward Company, Washington; Asher Humes, D. L. Ward Company, Wilkes-Barre.

News of the Chicago Trade

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, July 24, 1922.—H. A. Rowley, of the Chicago Paper Company, left for Sturgeon Bay, Wis., July 17, where he will spend a month's vacation. He is a strong advocate for out-of-door life and will spend most of his time fishing and hiking throughout the northern part of Wisconsin.

J. H. Coy, of the Marathon Paper Company, is to leave for Park Falls, Wis., where he will rest for about two or three weeks. Mr. Coy and family will motor from Chicago stopping at all interesting points along the way. He also intends to visit the mills of the Marathon Company which are located in northern Wisconsin. Fishing is a vacation man's prerogative and from all talk Mr. Coy intends not to miss any of this pleasure while enroute.

G. J. Cadwell, assistant general sales-manager of the American Writing Paper Company is at the company's office, 10 South La Salle street, on a trip from the company's general offices at Holyoke, Mass. Mr. Cadwell is a former Chicagoan and worked many years for the American Paper Company here in Chicago before being transferred to Holyoke. He is about the city visiting his many old friends and relatives and will leave for the East about July 29.

C. W. Hollenback, salesman of Bradner-Smith & Co., 175 West Monroe street, has motored to Wisconsin where he and his family will visit for the next two weeks.

J. E. Thorndyke, salesman for Bradner-Smith & Co., has left for Vancouver, British Columbia, to visit for a month.

H. G. Smith, credit manager of Bradner-Smith & Co., is spending his vacation in the Northwest. Mr. Smith is expected to be gone a month and will return about the middle of August.

I. A. Kennedy of Bradner-Smith & Co., motored with his family to Antioch, Ill., to visit for about two weeks.

XUM

CONDITIONS IN THE GERMAN PAPER INDUSTRY

By S. Ferenczi, Editor of Papier-Zeitung

Berlin, Germany, July 8, 1922.—The great social event of the last weeks was the convention of the German Paper Makers' Association in Nuremberg. It was an exceptional gathering, as it was at the same time the fiftieth anniversary of the Association. Just 50 years ago, in 1872, soon after the victorious war against France, the paper makers all over the new empire thought it advantageous to have an association of their own. About twenty paper makers came together in Nuremberg and founded the Association, which has now about 500 members representing almost the whole paper making industry of the country. Five of the founders are still alive, and they have now been nominated honorary members of the Association. The president, Rudolf Ebart has been honored by the Technical University in Darmstadt (which has special classes for paper makers, maintained by the Association) making him "honorary doctor of Engineering." The same title was conferred to Dr. Adolf Scheufelen, vice-president of the Association, by the Technical University of Stuttgart. Both of the new honorary doctors have also technical merits: Mr. Ebart as chief partner and manager of the firm Gebr. Ebart in Spechthausen near Berlin, whose mill for almost a century has made the paper for the Prussian and German banknotes, some of them with artistic watermarks; Mr. Scheufelen's mill in Oberlenningen was the first to make coated "art printing" paper in Germany.

The Association of the Pulp and Paper Chemists and Engineers at about the same time held a meeting at Nuremberg, and the following subjects were dealt with: The ventilation of the paper machine building; The influence of drying upon the sizing of paper; Dr. Ruth's steam accumulator and its use in chemical pulp mills; Roofs for paper mill buildings. A new method of making the chemical pulp ready for the wet machine, a special feature of this method is a new sort of inclined flat strainers patented to the Swedish engineer Mörch.

Paper Market Not So Active

The paper market has lost in the last weeks much of its activity, though paper is still scarce in the whole country. The mills are provided with orders till about November, but the buyers cannot afford to pay the high prices, as notwithstanding that the always increasing inflations—money is getting scarce, bankers are cutting the credit to the trade, and payments are coming in very slowly. The buying power of the paper users and converters has diminished, as the prices of all commodities have about doubled since the last two or three months. The conference of Genoa and the bankers' meeting in Paris having not brought the big international loan for Germany, the mark began to drop, and the murder of the minister of foreign affairs, Dr. Rathenau, caused a new slump of the mark; the socialistic parties tried to get the Government into their hands, but the demonstrations and strikes by which they would demonstrate their power led to riots in many places and had the effect that the public opinion now demands a policy which has to consider also the interests of the wealthier class. So everything is in suspense, and business is more and more depending on politics. The Berlin printers are on strike and all printing offices have been closed since July 1, except those of the socialistic parties. The printers' workmen left their working places, though they have a contract, and though they have been promised the new high wages they asked for, after having resumed work. The leaders of their unions have lost their influence with them, and the political character of the strike is obvious. The master printers are decided to stick to the contract, and it is supposed that the workmen will in some days return to work.

Some thousands of tons of printing paper have not been used in the meantime and are free for the open market. Part of this quantity will be ready for exportation, as foreign money is strongly wanted, and the dollar is as high as 530 marks today.

The home prices for pulps have been fixed for the month of July by the unions of the pulp makers as follows (in marks for 100 kilograms, f. o. r. at the station of the paper mill):

Chemical Pulp.

II a.	Unbleached	1,625
I b.	(Newspaper sulphite)	1,750
I a.	Unbleached	1,825
I a.	Easy bleaching	1,950
II a.	Bleached	2,200
I a.	Bleached	2,300

Mechanical Pulp.

I a.	Unbleached	1,450

These are the official minimum prices; yet it is very difficult to get chemical pulp from the mills at these prices, as the demand is much greater than the supply. As the German coal goes in big quantities to France on account of the reparations, our mills buy now British coal. Some chemical pulp mills in Upper Silesia and the Memel territory have been detached from Germany and their output goes to foreign countries, as they would be obliged to pay high custom duties when imported to Germany. The artificial silk factories also are heavy buyers of sulphite pulp, and some pulp yarn factories are very busy, as cotton is getting more and more expensive. Only the mills making news print paper get the pulp at the official minimum prices as the newspaper publishers are favored by the government.

Prices Likely to Advance

The paper prices for July have again been raised by 20 per cent. and for the following month a new increase in prices is in sight. News print paper in rolls costs now at the mills 2,000 marks the 100 kilograms, that is about 98 times the pre-war price. Many country newspapers cannot afford to pay these prices and cease to appear or reduce the number of their issues. The government has tried to help them by reducing the railway freight for news printing paper and the taxes on newspaper advertisements. Just now a new law is before a parliamentary commission by which a fund of 500 million marks is to be raised yearly for lowering the cost of paper to the newspaper publishers. First it was intended to collect this sum from part of the export profits of the paper trade; this way was opposed by the members of this trade, and also by the woodland owners, upon whose shoulders the tax was to be laid later on, so the government decided to take the money from the export profits of the whole German export trade.

Worm-killed Lumber Good for Pulp

[From our regular correspondent]

Montreal, Que., July 24, 1922.—That lumber killed by the spruce bud-worm is perfectly good for the manufacture of pulp is the contention of Dr. F. C. Craighead, of Ottawa, who is doing special work in New Brunswick for the Dominion Entomological Branch in connection with spruce bud-worm infestation. He states that this season a firm in the province of Quebec is using lumber killed by the bud-worm for the manufacture of pulp to the extent of 75 per cent of the total passing through the mills. Investigation work is now being carried on at various places in the northern and central portions of New Brunswick.

XUM

A New Sulphite for Book Mills!

M D
L

CLEAN

GOOD STRENGTH HIGH COLOR

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XUM

PAPER CONSUMPTION DECLINES IN GREAT BRITAIN

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., July 24, 1922.—Constant Southworth, acting chief of the Paper Division of the Department of Commerce, has compiled the following from various sources regarding the British paper industry.

There was a sharp drop in the consumption of paper in the United Kingdom in 1921, as compared with 1920. The consumption in 1920 amounted to 1,743,028 tons, while the consumption in 1921 totaled only 908,807 tons. Ordinarily, slightly more than one-third of the paper consumed in the United Kingdom is imported.

According to figures appearing in the Industrial Year Book, 1922, the production of different kinds of paper in the United Kingdom is divided as follows:

	Per cent of total production.
Engine-sized, writings and cartridges, fine printings, and lithos	41.2
News, white mills, and wall papers	23.5
Browns, wrappers, grocery, and packing papers	18.4
Pulp, mill, leather, glazed, and strawboards	4.7
Machine-made, tub-sized, and air-dried	3.8
Wrapping	3.6
Envelopes, printing, litho, and cover papers	1.6
Blotting and plate papers	0.7
Hand-made paper	0.4
Cigarette and copying tissues	0.3
Other varieties	1.8

The preceding figures are based on information supplied by the Papermakers' Association of Great Britain and Ireland, and relate to a total production of 516,200 tons.

In certain cases it is difficult to interpret the meaning of these figures because of the vagueness of some of the headings. For instance, it is hard to know why "wrapping" should be classified separately from "browns, wrappers, grocery, and packing papers." Moreover, it is not specified whether these figures are compiled on a basis of tonnage or of value. Presumably they are on a basis of tonnage.

However, the figures serve to show that engine-sized writing paper and high-grade book paper together form the group of paper produced in the largest amount. News print, including hanging paper, ranks next and wrapping paper third. Paper board and extra-fine papers make up a very small part of the total tonnage.

The exports of paper from Great Britain are very small compared with production and imports. In 1921 the exports of paper from the United Kingdom amounted to only 73,250 tons.

American News Print Received in England

There was considerable comment in the United Kingdom on the recent arrival of 2,500 tons of news print from the United States. It is an unusual thing for a shipment of paper of this size to be sent from the United States to England. Its arrival consequently has caused some surprise and apprehension in the trade on account of the already keen competition existing in the English news print industry. The arrival of this shipment is regarded as significant of a recent tendency toward rearrangement of world distribution of paper. In connection with this shipment and shipments, during the 18 months, of European news print to the North American Continent, it is being asked in certain quarters if it would not pay the paper manufacturers, both in North America and Europe, to try to avoid the expense of a transoceanic exchange of news print.

Australian Market for British Paper

British trade papers state that the Australian demand for paper is increasing. On August 1 the present restrictions, which prevent imports of paper from Germany into Australia, will be taken off. Paper manufacturers in the United Kingdom are afraid that this removal of the barrier to imports from Germany will result in dumping. To reassure those interested in maintaining a profitable level of prices for paper in Australia, the Minister of Customs has issued a statement to the effect that no other country has framed such stringent regulations to prevent illegitimate flooding of its market as has Australia. It is said that the power given by these regulations to bring the values of goods imported from Germany or elsewhere up to the value of goods imported from the United Kingdom will be rigorously enforced if necessary.

Cost of Shipping Paper by Rail

According to an investigation recently made by the Papermakers' Association, it costs considerably less to transport news print from certain Norwegian and Finnish ports to consuming centers in the United Kingdom than it costs to send news print by rail from certain paper-manufacturing regions in the United Kingdom to the same British consuming points. Thus, it costs much more to send news print from Lancashire to London by rail than to send it from Christiania or Helsingfors to London. Similarly, the rail charge for conveying news print from Thamas to Glasgow is much larger than the rate for transporting news print from Christiania or Helsingfors to Glasgow. In many cases during recent months the Scandinavian manufacturer has had an additional advantage in the depreciation of his country's exchange.

Because of the disadvantage suffered by reason of these facts British paper makers are agitating a radical reduction in the railroad rates of their country. At the same time an agitation is going on to reduce the rates for ocean transportation, particularly to Australia. It is claimed by British manufacturers that goods can be shipped from Swedish, German, and Dutch ports to Australia at rates from 10 to 12½ per cent below those charged by the British conference lines.

Market for Kraft Paper Strong

The market for kraft paper in the United Kingdom is becoming strong. It is not unlikely that something in the nature of a boom will take place. At the same time, it is reported that the demand for kraft in other countries, particularly Germany, is greatly improving.

Scottish Esparto Market

It is reported from Scotland (a country which makes a specialty of esparto paper production) that the demand for esparto papers show a distinct improvement. Some of the Scottish mills are sold up on orders for esparto paper. It is claimed that the quality of the paper now being made is fully equal to if not better than the paper made 10 years ago. It is stated, however, that the variation in the prices charged by different manufacturers is too great and that there should be more uniformity in price quoting.

Moving Pictures of Book Manufacture

In connection with the move of the United States Department of Commerce to cooperate with industry in preparing films for use in promoting sales of American goods in foreign countries, it is interesting to note that a moving picture film showing the process of making a book has recently been shown in London.

Dill & Collins Open Chicago Office

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, July 24, 1922.—The Dill & Collins Company, of Philadelphia, has opened a new branch office in Chicago. The new Chicago branch is located in the Continental and Commercial Building, 208 South La Salle street. It will be under the direction of Courtney H. Reeves.

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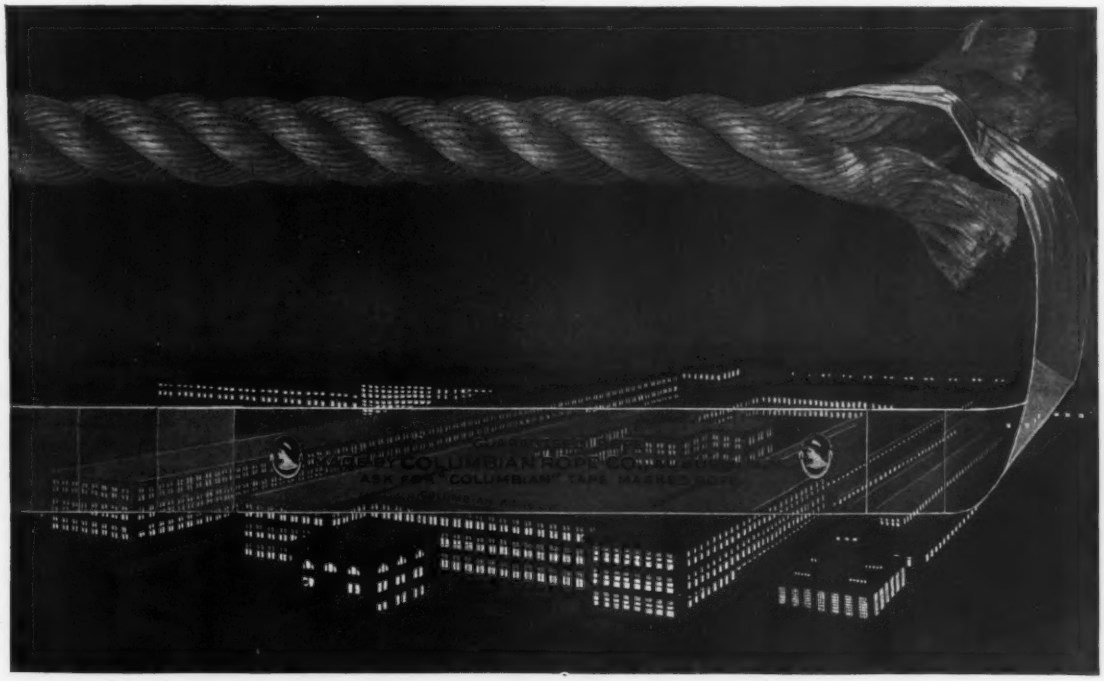

The Company—Back of Its Guarantee

There is a real significance to the red, white and blue *Tape-Marker,* which can be found in one strand throughout the entire length of every Columbian *Tape - Marked* Pure Manila Rope.

It has a broader meaning than merely a mark of identification. It means that the manufacturers stand behind every rope containing this Marker, because they know that it has proved, and is proving worthy of such confidence.

By means of this *Tape-Marker,* a permanent connection is established between the Company and its product, which is a protection to the dealer, and an infallible guarantee to the ultimate user.

Mr. Dealer—Insist on getting guaranteed Columbian *Tape-Marked* Rope. There is a jobber in your vicinity.

Write for *your* copy of the folder, "How Columbian *Tape-Marked* Pure Manila Rope is Made."

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AMERICAN PAPER MEN SEEING THE SWEDISH MILLS

By Dr. Hugh P. Baker, Executive Secretary of the American Paper and Pulp Association.

Stockholm, July 10, 1922.—The hospitality of the Scandinavian paper and pulp manufacturers to American visitors has been the most notable single feature of the visit to Sweden. A willingness to show us the mills, processes and operations in general, is in notable distinction to the old spirit of Europe to entertain American visitors so elaborately that they would see nothing of the industries which they wished to visit.

In the effort to build up a harmonious relationship between the United States and Sweden, the Swedish manufacturers have taken Mr. Sisson and myself to the mills, and have disregarded the fact that a manufacturer of Mr. Sisson's prominence is a business competitor of the hosts of our party.

Want to Avert Destructive Rivalry

The new attitude appears to be a belief that destructive rivalry between the two countries can be averted and a friendly competition established by a better knowledge by each country of the situation of the other.

The importance of the American market to the Swedish manufacturer cannot be over-estimated, either by the American or the Scandinavian. This being the fact, a brief resumé of some of our experiences will illustrate the point already made, that we are being given a real opportunity to see the Swedish mills and to study their manufacturing problems.

It has taken time to accustom ourselves to living daily with people who do things differently from the way we do them, and this doing things differently means thinking differently, so the days have passed without our really getting into things, as we do so quickly in our own country. These Swedes and their ancestors have been living here in the country a thousand years and their development as a people and a nation has been slow and hard because they must fight constantly with nature for the living they are making. Perhaps our first impressions were gained under rather adverse conditions but we landed on a rocky coast and there have been few warm cheerful days since our arrival. But this constant struggle has made them good fighters and they have learned that what they gain must come through hard work and high quality in what they turn out.

In all we have seen of the forests, the pulp and paper mills, their means of transport and their utilization, we are convinced that we can expect quality from them all the time in what they send out from the pulp and paper industry. This means keen competition for the world's markets. If we ever try to compete for markets in South America, or the Far East—and I hope our industry will get into these markets with all four feet, we will win our markets only on quality and a willingness to understand and adapt ourselves to those markets—characteristics which these people here seem to understand in an effective way.

Secretary Baker Meets Minister Wallenberg

It was fortunate and very pleasant for us that Mr. Axel Wallenberg, Minister from Sweden to the United States, was on the boat coming over. We had several talks with him as to conditions here in Sweden and as to what we should see and his suggestions and his help since we arrived here have been very helpful. Mr. Wallenberg is a member of one of the most influential families in Sweden and wide business experience here has made it possible for him to see our conditions in America with an unusually clear vision. It is fortunate for the pulp and paper industry here and in America that Mr. Wallenberg returns to America next fall. We may count upon him to do all possible to develop better relations, better understanding between parts of our common industry in Sweden and America.

To acquaint ourselves somewhat with the country, and to get our land legs gradually we spent the first three days in Sweden in a trip on a small boat through the Gotha Canal from Göthenborg to Stockholm. As the weather was good it was a delightful trip. We had opportunity to walk and visited wonderful electric power plant at Trollhattan—situated on a river which has much the same reserve of water as Niagara has. We were surprised at the large size of the farms—which in many cases resembled the farms of Wisconsin and Minnesota—in size and arrangement and appearance of buildings. Upon our arrival in Göthenborg we were greeted with telegrams from the Swedish Cellulose Association and from the Finnish Association. Upon our arrival in Stockholm we found a letter from Consul Thorsten Lundgren, director of the Swedish Wood Pulp Association, telling us of arrangements he had made for our entertainment over the week end, which happened to be the Swedish Holiday of Midsummer. Saturday morning we were met by Consul Lundgren and his wife with a machine and driven some forty miles out to Klokloster—an old castle now owned by the leading noble family of Sweden—wonderful collection of arms—guns, etc.—and tapestry. We lunched there (in the rain) then drove to Uppsala, the seat of the oldest Swedish University. Vacation time made it impossible to see much of the University but we went into the old church built nearly 300 years ago and saw the graves of Linnæus the botanist, and Swedenborg the religious leader. Sunday morning we were met at the dock in front of the Grand Hotel by Consul and Mrs. Lundgren with a tug boat and spent Sunday running down towards the Baltic and back. The Consul had as his other guests a young Swede—now in the Swedish foreign office in Stockholm—and his wife, a delightful American girl from Ohio, so we had an unusually delightful day, and it was one of the few fine clear days we have had so far.

Enjoying Swedish Hospitality

Monday was spent in conference with Consul Lundgren on details of our proposed trip through Sweden, with a visit to the Forest Academy at Stockholm, the National Forest School where we met the Director, Professor Anders Wahlgren and Prof. G. Schotte to whom we had letters of course. We were invited to attend a three-day excursion of the Association of Foresters of Northern Sweden on July 3, 4 and 5—which we accepted as it seemed the best possible opportunity to see the Swedish forests. In the evening we went to dinner at Minister Wallenberg's, in their home near Drottningholm Castle. The Minister has a fine family, and needless to say we had an enjoyable evening. A young man representing the Scandinavian American Trading Company was present also and afterward drove us to Sansten, a famous park in Stockholm. The Minister is interested in the Kramfors Company with big pulp mills, and I believe this trading company represents these mills in America

We met Baron J. Mannerheim Tuesday, and he invited us to spend two days at his home near Norsholm, southwest of Stockholm. We go down there July 11. He was in America two and a half years ago with J. Chrs. Storjohann of the Billeruds Company, and at that time many of our manufacturers met them. Mr. Storjohann has been resting at Baden in Germany but we expect to meet him and see his mills in western Sweden before we leave for Norway. Baron Mannerheim made arrangements with Minister Wallenberg, who both belong to the Swedish Woodpulp Associations, for us to visit mills near Sundsvall and Harnosand.

In the Paper Making Regions

Gavle—by the Baltic—July 10, 1922.—The tremendous importance of the wood using industries to Sweden was made graphically evident to the American visitors during a trip into the paper and

(*Continued on page* 30)

Beater Development

Ever since the first beating engine was invented, some two hundred years ago, paper mill men have felt the need of increasing the efficiency of the beating process. For the last fifty years they have been looking forward to the day when it could be made continucus.

The BIRD CONTINUOUS BEATER ATTACHMENT fills this need in a very practical way. It can be fitted to any ordinary beater tub thereby increasing the output of the beater by approximately 100 per cent.

The BIRD CONTINUOUS BEATER ATTACHMENT is inexpensive.

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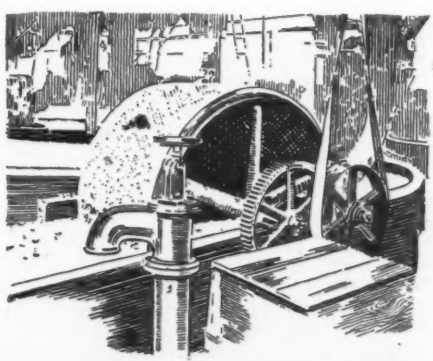

BIRD CONTINUOUS BEATER ATTACHMENT

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AMERICAN PAPER MEN SEEING THE SWEDISH MILLS

(*Continued from page 28*)

saw mill region of northern Sweden, and the economies effected by the utilization of what would be considered waste by the American mills were not the least notable phase of Scandinavian methods.

A trip to Sundsvall was the first real visit to the paper making regions of Scandinavia. Taking a sleeper one evening, we reached Sundsvall early the following morning. Mr. J. W. R. Lilliestrale, works director for Wifsta Varfs, A. B. (A. B. means Inc.) was on the train and took us in hand Wednesday morning. At Sundsvall we were joined by K. W. Sundblad, engineer for Wifsta Varfs A. B. and they had a tug boat ready for us in which we went about the harbor, around which are located numerous sawmills (37) and pulp mills. The port of Sundsvall exports annually 150,000 standards (165 cubic feet to a standard) and 300,000 tons (all tons referred to in Sweden are long tons). Minister Axel Wallenberg is president of this company. They own over 500,000 hectares (2.47 acres equals 1 hectare) in Sweden and 10,000 hectares in Norway and drive some of their timber 300 miles.

In driving, which they call "floating" they lose 2 to 3 per cent of the timber, probably because of the many small pieces. About eight million logs came down the river annually. In the Dala Alven region (Alven means river) there are about three cubic feet per log, which in 1920 cost about 2½ Kroners per log ($1 is now worth about 3.80 Kroners). This company produces anually 57,000 tons of sulphite with 300 tons screenings and 20,000 tons sulphate and the actual time of cooking easy bleaching pulp is fifteen hours, kraft sulphite 18 hours and coal at Sundsvall, English coal, of course, costs 20 to 25 Kroner per ton. They purchase their limestone from Island of Gotland, carried on by boat, of course. Apparently nearly all of the timber and pulp producing companies purchase timber from the government. Auctions are held by the government and timber is carefully described by a pamphlet, divided usually into sixteen classes, from five inches to thirty inches in diameter. In 1921 this company bought in one lot in Jamsland 2939 stems for 8/90 K per stem (about three to four cents cubic foot per stem). The company uses about three million pieces per year. We visited their saw mill, interesting as they do all their sawing with gong saws, saying that circular saws are both wasteful and inaccurate, evidence of their desire for quality. They have one of the finest lumber yards I have seen; no dry kilns, for all lumber is air dried. We then visited the sulphite mills and alcohol plant. The alcohol plant is very modern, making 60,000 liters per week of ethyl alcohol from liquors from the mill. We were entertained at the home of Mr. Lilliestrale at Wifsta Varfs. Both he and Mr. Sundblad speak some English. Mr. Sundblad has drawn plans and helped to construct mills in the United States.

At the Kramsfors Plant

The Wifsta Varfs people delivered us by auto to the Kramsfors A. B. people at Harnosand on the Angermanalven in the province or country of Vasternorrlands (about the same latitude as northern Hudson Bay). We were met by Birger Sundfeldt, manager of Abbola sulphate mill, son of Gustaf Sundfeldt who is general manager at Kramsfors. Twelve million logs came down the Augerman river annually for the fifty saw mills on the river and the six pulp mills. The logs run about four cubic feet to a log, taking about twenty logs to our cord and making the consumption on the river about 600,000 cords. The six pulp mills on the river make about 110,000 tons of pulp, only 10,000 of this mechanical pulp. About 100,000 horse power is available on the river, but it is only partly developed. The Kramsfors A. B. of which Baron Mannerheim is chairman of the board or president, has two pulp mills on this river and three saw mills, makes 30,000 tons of strong sulphite and 16,000 tons of sulphate. The company owns about 400,000 hectares of land and the general cut of wood for miles in this section last year was said to be about thirty per cent. of normal, as the companies had their yards full of high priced woods (sounds like our conditions) but Kramsfors cut seventy-five per cent. This company owns mills at Franco near Kramsfors and at Umea.

Some Interesting Arrangements

It will not mean much to try and describe other pulp mills on the river. Kramsfors A. B. has its own power plant and sells electricity to other plants in the district. Some mills are getting power for $40 per horse power year. The company employs interesting cable and bucket arrangements for taking saw mill waste to the pulp mills, often carrying waste a mile and more, high in the air on cables. They say it is a cheap method especially during the deep snow of winter. The company produces 1,200 liters of alcohol per year. Dr. Ing. Rudolph Sieber, a German, is their chemist and is very active in their efforts to save waste. Director Sundblad entertained us at dinner in his home, though we stayed at small hotel in Kramsfors. The second day we visited two saw mills and the great sorting boom at Sandslan—twelve million logs came through this boom in 1920 and seven million logs in 1922. Logs are marked sometimes eighteen times on one log, with the owner's mark and the logs are separated at this boom which covers 125 acres of water and employs 700 men, and are bundled by machinery so that they can be floated to the yards and lifted by cranes to be stored for winter use. This boom arrangement allows of bundling 100,000 logs in sixteen hours. Small pieces and broken logs are sent to the small power plant near by for fuel. This plant furnishes power and light for the boom as they work sixteen hours in shifts in the fall and must have light. A separate operating company made up, of course, of the various mills on the rivers, operates the boom.

From Kramsfors we took train to Mora in Delarna to spend three days in the annual "Norrlands Skogsvardsforbunds Exkursion." This gave the opportunity we were seeking to see the forest and to learn generally as to forest conditions.

Maine's Wood Supply

[FROM OUR REGULAR CORRESPONDENT]

BANGOR, Me., July 24, 1922.—Former Forest Commissioner Colby of Maine estimates that there are 25 billion feet of spruce in Maine six inches in diameter and over, including a small percentage of fir, six billion feet of pine, three billion feet of cedar and one billion feet of hemlock. He also says that there are many millions of feet of the common hardwoods, beech, yellow birch and maple, but a large part of it at present is not marketable on account of lack of transportation facilities.

He estimates that the annual cut of timber for the past decade in Maine has been about a billion feet, and that the annual growth would not equal more than one-tenth of the amount cut. The natural result of annually harvesting 10 times the amount of timber grown will be to reduce the State in the future to complete timber exhaustion.

Mr. Colby is doubtless one of the best informed men in Maine on matter of timber supply and prospects but it is notorious that other authorities on this subject in the past have fallen wide of the mark in their predictions. In 1880, Senator Eugene Hale, speaking in Bangor, declared that Maine's forests were doomed to early destruction. Said he, "Within 40 years the State of Maine will be as bare of merchantable timber as is this platform on which I am standing."

Maine is close to the dead line set by Senator Hale in that speech yet the State is cutting every year quite twice as much timber as it was cutting in 1880. It is the belief of many practical lumber men that the growth each year is more than one-tenth of the annual cut, and that the forests of Maine will continue to serve the people for more than 40 years to come.

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More Than a Casting!

A careful selection of various brands of pig iron.

A chemical analysis of each car load.

A RIGID SCRUTINY OF MIXING THE VARIOUS BRANDS

A chemical analysis of the mixture.
A daily transverse breaking test.
A frequent tensile test.

These are the unseen things you purchase in machinery made by

BELOIT IRON WORKS

BELOIT, WISCONSIN, U. S. A.

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THE SEVEN-PHASED STANDARDIZATION OF PAPER

By R. E. Rindfusz Ph. D. Sec. American Writing Paper Co., Holyoke, Mass.

The following is one of the most concise statements of the advantages of standardization in paper that has appeared. It was prepared by Dr. Rindfusz, at the request of the National Association of Purchasing Agents, and was read at the Annual Convention of that organization in Rochester, N. Y., May 16 to 19. Inasmuch as standardization is a particularly vital theme at the present time, the paper trade cannot fail to be interested in reading this explicit statement of the essential phases of standardization.

The economies and benefits of standardization as applied to qualities of goods and processes of manufacture have been so thoroughly demonstrated within the past few years as to be entirely outside the argumentative field. The danger now is that the term is becoming a mere meaningless expression, falling lightly from the lips of the glib-tongued salesman without any comprehension as to its real significance or any knowledge as to whether or not it may honestly be applied to the goods he is discussing.

We have seen the same vitality-robbing evolution manifested with the terms "efficiency," "scientific," and "research," until the mere use of them is becoming meaningless. Such an evolution is common and always to be fought against. The great revivals of morals and religion throughout history have been largely a rewakening of people to the vital significance of terms they were using lightly and without meaning. "The letter killeth, but the spirit maketh alive."

It is therefore my purpose in this short paper to attempt to outline as I see it, and as the company I represent practices it, the vital significance of the term "standardization." I feel safe in assuming that you purchasing agents, whether you buy directly from the paper manufacturer or not, act on the principle that you must know the ultimate source of your supply, and that the business and manufacturing methods of your supplier, even though removed by a middleman, are decidedly your business. This attitude was given great impetus during the recent war, especially by Brig. General McRoberts, head of the War Purchasing Department, who, when he considered buying of middlemen, always sent officers to investigate the manufacturers back of the people he bought of.

Standardization in the paper industry—to embrace its complete substance and vitality—has a seven fold application. These are the standardization of (a) raw materials; (b) processes; (c) product; (d) line (grade standardization); (e) distribution; (f) price; and (g) uses. The entire time allowed for this paper could easily be exhausted in discussing any one of these, but I shall attempt rapidly to take them up in order, indicate their meaning, and particularly to touch upon the advantages through each.

First: Raw Materials

Obviously the raw materials going into a product must be of standard and uniform quality, if the processes of manufacturing and the nature of the product are to remain unchanged. Sometimes it costs a little more to hold rigidly to definite standards of raw materials, but the economies far offset this. No one can appreciate better than you purchasing agents the waste of inefficient buying, the small turnover, the immense idle stocks, the tied up storage space, insurance and investment costs and the deterioration of idle stocks that come when you attempt to buy for requirements that are varying. Under the old method of manufacture, we never knew for any time ahead what was to be made in a particular mill. Therefore, we could not prepare adequately. The amount of money we carried in inventory was largely beyond our control, and spot buying for emergency needs that arose over night due to the arrival of an order was the rule rather than the exception.

Second: Processes

A standard product made in long runs from standard materials allows for the standardization of each step in the process of manufacture. This means the finding out through engineering and plant experience the one best and most economical method of doing each thing and making that "standard practice." It also means the opportunity to have the best euqipment for each thing and that equipment completely "balanced" for making the particular product it is turning out.

Since we have inaugurated standardization in our mills, we have released immense amounts of equipment that otherwise were kept for occasional uses. We have been able to move these into other mills where they are finding constant use, and our overhead for idle equipment has been materially reduced.

It must be remembered that in any manufacturing process the various units through which the material has to pass will be in "balance" only within a very narrow range of variation in the product; any considerable change will mean that the same units will not be able to keep up with others and there will be "down" time. For instance, if the time of beating the stock is increased, and it varies from one to eighteen hours in actual mill practice, depending on the grade to be made, either we will have to employ extra beating equipment with its attendant power supply and expense, which would lie idle part of the time, or during the time of increased beating the big paper machine will lie idle waiting for stock. When you remember that a paper machine costs anywhere from $150,000 to $500,000, you can see what "down" time means.

Again, standardization allows for long and steady runs. Under the old system it was common practice for us to make changes in the kind, color, weight and size of the paper going over the machine several times a day. Each of these changes meant loss of production and wasted paper, since it takes some considerable time to get stock going over according to specifications. It meant even cleaning up the machine, the beaters, the stuff chest, the Jordan, the screen, changing felt, sometimes changing wires, and making complete re-adjustments. Picture for yourself the expense of such loss of actual running time on a million dollar equipment!

Again, in the short run the entire time of the machine crew is of necessity taken up in getting a product that will "get by." It is only in the long and continuous runs that they can give their attention to the niceties of manufacture which make a little better product, run a little greater speed, which insure for the consumer the desired uniformity and reduced costs and even for the manufacturer turns a small loss to a small profit.

It should be pointed out in this connection that the thing to remember is that each line or trade name of paper, speaking now particularly of bonds, involves on the average three weights, three sizes, and from three to five colors—many of them carry eight or ten colors—thus making a total of twenty-seven or more items to each line. It can readily be seen that there are very few private brands in existence which offer orders large enough to give the advantage of standard processes of manufacture. It should also be remembered that even such a small thing as changing a dandy roll and making two papers which are identical, except for the watermark, involves a considerable cost, since through all the processes following the machine, from the rough paper to the finished product, those two lots have to be kept separate.

Third: Product

It has already been indicated that the standardized manufacture of paper of fixed specifications in large runs allows for the maximum uniformity possible within the limits of manufacturing skill. The uniformity of the product and the knowledge that this is to be made and sold continuously allow the mill to run on a steady production schedule, building up stocks during periods of low demand and depleting them during periods of high demand.

(*Continued on page* 34)

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"Here Is the Bag I Want"

Make it easy for your salesman, Mr. Jobber.

Give him what the grocer prefers:

LAWRENCE GROCERS' BAGS

The grocer likes 'em because Lawrence Bags are so strong, so dependable, so uniform and because *his* customers prefer them.

Play safe by concentrating on this high-grade line; avoid tying up unnecessary capital and cluttering up valuable warehouse space with "this, that and the other" brand.

James Lawrence, President

THE LAWRENCE BAG COMPANY

MIAMISBURG, OHIO

XUM

THE SEVEN-PHASED STANDARDIZATION OF PAPER

(*Continued from page 32*)

On the unstandardized basis, the only alternative is to follow the feast and famine method.

The definitely standardized paper is made to meet particular needs and built according to definite specifications, and is constantly tested to see that it is up to these specifications and that thorough uniformity is maintained. The ordinary paper buyer and paper user is not a paper expert. We could cut a cent per pound or more in quality-value out of each of our higher grade papers and the ordinary user would be none the wiser. However, if we did it there would exist the same incentive for taking out another cent. In fact, that is just what has been done in the past, with multiplicity of brands, both mill and private, though chiefly private. Papers have been built for the purpose of cutting into the trade of another on the basis of that cent which was taken out of its contents. Consequently, the general trend of qualities has been downward and, as a result, low grade papers are in use for which they are not fitted and the paper industry has hurt itself and its customers.

Under the chaos of paper qualities which still exist, you can buy safely only by one of three methods: (a) Become such a paper expert that you are willing to match your own knowledge and judgment against that of any manufacturer or dealer. (I may add that this involves the equipping and operating of a complete paper testing laboratory): (b) Employ such a laboratory or staff of experts to aid in your buying; or (c) buy standardized papers bearing the manufacturers' mark, guaranteed and made according to definite specifications, so that you may know the quality of these papers and the needs they are designed for.

Fourth: Standardization of Line

So far we have talked about the manufacture of a standardized product. However, no one paper or no small group of papers will meet all the paper needs, nor is it desirable to have such an excessive number of papers that the differences between them become small and meaningless and result in confusion. The ideal is to have just enough papers to meet all the real needs, no grades overlapping, and still no grades so far apart as to leave genuine intermediate needs unprovided for. Standardization of a line means just as much blocking up the holes to meet the real needs as it does eliminating the overlapping grades. There is no such thing as a universal paper, and a utility paper is only a makeshift. The real discerning users demand the *right* paper in each place.

Fifth: Distribution

Since each business can expect ultimately a profit only as it serves, the real end of standardization is to effect economies and efficiencies for the consumer. The distribution of the goods, therefore, must be by a standardized, simple and direct method. The advantages gained by manufacturing economies and the effects of efficient business policies must be passed on without impairment, nor must the identity of the manufacturer and the knowledge of the way he conducts his business be lost to the consumer through an artificial blind wall built up by the distributor. The distributor has an important function for which he should realize a fair profit proportional to the manner in which he serves both his customers and the manufacturers for whom he distributes. He should not be allowed to pose falsely as a manufacturer. Moreover, the mutual knowledge and relationship between the actual producer and the final market of the goods, or consumer, are too vital, and their interests are too common, for any industry to prosper which establishes an artificial barrier between them.

Sixth: Standardization of Price

When values are fixed and known, when the buncombe is taken out of the product and it is made according to definite and open specifications for definite uses, the next step of standardization should be a fixed and known price, uniform throughout, quality and terms considered. The great medium for haggle-buying is unidentified, unstandardized goods of unknown and varying quality, and in such buying the customer is invariably the loser. The unpriced, unvalued, bastard goods form the favorite medium for the commercial adventurer—the plunder-merchandizer, so-called by Mr. Mahin. All standard goods of fixed price and known origin are the logical mediums for the service-giving merchandizer. The former involves no good will and plays only for the individual and immediate deal; the latter combines the good will of the manufacturer who stakes his all on his product together with the good will of the service-giving distributor, and builds for permanency in business relationships.

Seventh: Uses

It has been pointed out that line or grade standardization must be carried out so that the consumer may be properly served by the goods furnished him. It has also been pointed out that the manufacturer and the consumer must have free and intimate contact so that the knowledge of each may be used by the other; first, by the manufacturer in preparing the goods for the consumer, and lastly by the consumer in the use of the goods. This, we consider the final step in standardization; namely, interpreting the uses of the consumer in terms of the standardized line of goods and passing on to the consumer the information as to the uses for which each grade was prepared, so that the benefits of standardization of the line may be fully realized by the consumer. It profits the consumer nothing that we may have spent a great deal of time and money in preparing an article to meet his need unless he knows about that article and the uses for which it was made. This field is new in the paper industry, but already we have found the most glaring inefficiencies due to improper uses of grades and sizes of paper—absurdities, in fact, that seemed almost impossible, and we are devoting our energies most sincerely to the development of this genuine service.

In closing, let me emphasize again that the danger of standardization in the manufacture and distribution of goods is not that we shall over standardize, but that we shall lose the benefits and true significance of the fact by light talking and no doing.

Now this seven-fold application of standardization which we have briefly touched upon brings in its train great advantages and benefits to consumers of paper and printing, to distributors, and to manufacturers, many of which have been suggested. I might, in addition, if I felt warranted in taking your time, round out this paper by a consideration of these manifold results that follow from the seven-fold application. These results, however, are common to all well-organized industries of definite and standard products, with which you purchasing agents are familiar, and regarding which we could learn much from you. One of our reasons for being here is that we may profit by this association with you. I am very glad to say that my intercourse with you during the past few days has been of great benefit to me, and I am grateful to you individually and collectively for this great occasion.

Rush Rebuilding of Vulcanite Roofing Plant

DAYTON, Ohio, July 24, 1922.—The work of cleaning up the debris at the Vulcanite Roofing Company's plant at Franklin, is progressing rapidly. James Tingley, manager of the concern, will arrive from Chicago this week to take up his residence.

F. X. Phofl, mechanical engineer for Logan-Long Company, and John C. McKeown of McKeown Brothers, have arrived to take charge of the building of the new mill.

The felt mill will be in operation before many weeks. The entire plant will be completed in about three months.

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Will not absorb moisture or leak when left for an indefinite period.
Conveniently shaped; no holders needed.
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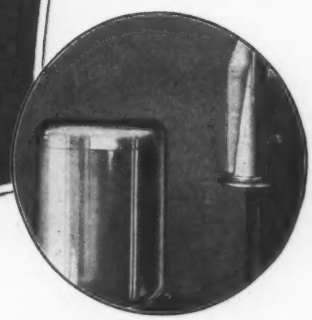
The dispensing tube may be had for attachment to post or wall, or to place on top of cooler. Its simplicity, fine appearance and low cost will please your customers.



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You have every advantage of quality and price with the *Vortex* line. The field for profitable paper cup sales is widened immensely by the unequaled advantages of the *Vortex*.

It is a good thing to know, too, that the *Vortex* is *the original, the patented* conical cup. It is known nationally and used nationally. Millions of these cups are sold every day.

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ANNUAL REPORT OF PAPER DIVISION

WASHINGTON, D. C., July 26, 1922.—Constant Southworth, acting chief of the Paper Division of the Bureau of Foreign and Domestic Commerce has made the following annual report to the Secretary of Commerce for the year ending June 30. The report is of particular interest because it covers the first months of the existence of the division.

General Service to the Paper Industry

Close contacts established with the paper trade. Services of the division gradually becoming known in the paper industry, not so much through advertising them as by work actually performed. Detailed canvass of the exporting experience and needs of individual manufacturers in the field of exporting now under consideration with the committee of the paper industry appointed to co-operate with the Department of Commerce. Information regarding this division regularly contributed to and published by trade journals, in order to keep the industry in touch with anything of special interest which the division is doing.

Questionnaire

Detailed questionnaire on foreign markets for paper and on the paper industry of other countries prepared; now practically ready to send out.

Publications

Confidential circulars and one trade information bulletin published.

"Commerce Reports" and "Exporters' Index"

Circular letter with sample copy of "Commerce Reports" sent to all important concerns in the industry in an effort to enlarge the subscription list of "Commerce Reports" and the membership of the paper industry on the "Exporters' Index."

Rubber Latex

Complete preparations made by means of cable communication with Commercial Attaché Tower, London, England, to import 500 gallons of rubber latex (the milk of the rubber tree) for distribution to various manufacturers interested in making experiments in using this latex in the manufacture of paper.

Organization and History

The Paper Division was one of the last of the commodity divisions to be established during the fiscal year 1922. Its formation was largely the result of the desire of the American Paper and Pulp Association to have a commodity division in the bureau to represent the paper industry. The organization conference took place on January 30th, in the offices of the Bureau of Foreign and Domestic Commerce. At that meeting a committee of ten prominent members of the paper industry met Mr. Hoover and representatives of the bureau. Grosvenor M. Jones was introduced as Chief of the Division.

For nearly three months part of the personnel of the division were able to give only part time to its work. Constant Southworth, who acted as assistant chief, shared his time with the Research Division until the latter part of April. Late in May Mr. Jones left the division to start organizing the work of the Finance and Investment Division, and Mr. Southworth acted as chief until the end of the fiscal year.

Volume of Work

The division has performed an almost steadily increasing volume of work. At the very start there was an unusual amount of correspondence owing to the publicity attaching to the formation of the Division. After that the volume of inquiries somewhat decreased, but from March on, the increase was fairly continuous. The figures for the weeks ending March 18 and March 25, are fairly representative of the volume of correspondence during the early period of the division's existence. In the week ending March 18, the division handled 14 incoming letters and 32 outgoing letters. In the week ending March 25, there were 17 incoming letters and 24 outgoing letters. In the last week of the fiscal year, the week ending July 1, a greater correspondence was handled than during any previous week in the history of the division. In that week 40 letters were received and 53 sent out. The rate of increase in correspondence evidenced by these figures is a fairly accurate index of the rate of increase in the volume of work performed by the division.

During June the total active personnel of the division consisted of two. It was, therefore, necessary to proceed somewhat more slowly than had been hoped for in the matter of several projects for allying the division more closely with the industry and for securing additional information on foreign markets for paper.

Nature of Work

The raison d'être of a commodity division is its superior facilities for intensive study of the problems of a single industry. Hence the work of the Paper Division resolves itself in a general way into an attempt to maintain close relations with the members and associations of the paper industry, to learn what it can do to help them in their foreign trade problems, and if possible to do it. The Paper Division is the foreign trade service bureau for the paper industry.

The services performed by the division during the fiscal year 1922 were as follows.

The co-operation of the division with trade associations consisted in establishing a working arrangement whereby problems in foreign trade presented by members of the paper industry to trade associations should be referred to this division for consideration, and problems in domestic trade be referred to the proper trade association for consideration; also the coness," in securing the assistance of trade associations in the operation consisted in the division's acting as a medium to encourage trade associations to furnish figures on production, shipments, etc., for publication in the "Survey of Current Busimechanical work of distributing certain publications of this bureau among members of the paper industry, and in arriving at a general working agreement to assist each other in all possible matters. Mr. Jones and Mr. Southworth attended the annual conference of the American Paper and Pulp Association in New York in the latter part of April, where they were able to meet many men prominent in the paper industry.

The division has not yet issued many publications on account of the limited personnel available for preparing them. It has maintained a section in "Commerce Reports" and has sent a circular letter with a sample copy of "Commerce Reports" to all important members of the paper industry, in an effort to enlarge the subscription of "Commerce Reports." Two confidential circulars and one trade information bulletin have been issued. The trade press has been kept notified of what the division is doing. So far it has been considered undesirable to publish statements advertising the general services which we are prepared to render the paper industry, because of the fact that the natural growth of the demands on the division, owing to its gradually becoming known in the industry, has more than sufficed to take the full time of the division's personnel. During June a proposed canvass of the paper industry to secure information regarding the experience and needs of paper man-

(*Continued on page 60*)

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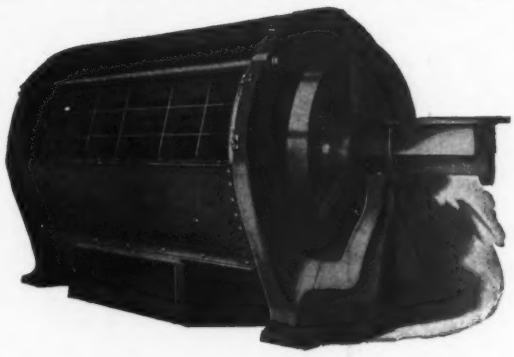

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New York Trade Jottings

Miss Olive Johnson, office manager of the American Paper and Pulp Association, returned this week from her two weeks' vacation trip to Iowa.

* * *

W. G. MacNaughton, secretary of the Technical Association of the Paper Industry, returned Wednesday of this week from a ten days' vacation trip to Wisconsin.

* * *

J. S. Luneschloss, manufacturer's agent, of 487 Broadway, New York City, announce that they are established with stock of goods in warehouse. Inquiries are solicited.

* * *

J. L. Seiler, vice-president of the Warren Manufacturing Company, 8 West 40th street, New York City, is enjoying a month's vacation in Nova Scotia and will return about August 1.

* * *

Clement & Stockwell, Inc., announce that "L. B. Steward, formerly manager, is no longer connected with the concern. At a later date, an announcement will be made relating to the executive control of the business."

* * *

O. M. Porter, secretary of the Woodlands Section of the American Paper and Pulp Association, will represent the Association at the Babson Industrial Conference to be held next week at Wellesley Hills, near Boston, Mass.

* * *

The F. J. McCarthy Company, manufacturers of paper and woodpulp, have recently incorporated under the laws of New York for $50,000. The incorporators were A. Riis, A. H. Hanson and W. Hager, their attorney being G. M. Spencer, 120 Broadway, New York City.

* * *

Postal cards from Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, now making a tour of European paper mills, would indicate that he is probably in Germany by this time and that he has finished his journey through Finland, Norway and Sweden.

* * *

R. & C. Paper Box Corporation of 80 Green street filed schedules in bankruptcy Monday, listing liability of $24,780 and assets of $5,19, main items of which are: Fixtures and machinery, $4,500 and wagons $500. Principal creditors listed are: Rose Kaplan $11,263, Morris Smerling $3,050, William R. Weiser $4,300, secured.

* * *

Warren B. Bullock, publicity director of the American Paper and Pulp Association, upon his return from Washington last week, reported that the tariff situation is very badly complicated. The paper tariff schedule will not be as badly cut as other items, such as cotton and wool, according to Mr. Bullock's understanding of the matter.

* * *

H. B. Wadsworth, manager of the Mishosha Company, Ltd., 51 East 42nd street, New York City, left last Saturday for Japan to make a survey of paper mill conditions there in the interests of his company. Mr. Wadsworth will sail from Vancouver, B. C., July 27, on the maiden voyage of the Canadian Pacific liner, *Empress of Australia.*

Hinckley Fibre Co. Bids in Property for $60,000

UTICA, N. Y., July 24, 1922.—The various creditors of the Hinckley Fibre Company are shown in the report filed in Federal Court by T. Harvey Ferris, attorney for the receiver. Henry R. Beebe, the receiver, also filed his report showing that the Hinckley Corporation bid in the property for $60,000 subject to the liens amounting to $441,341.

The liens include the $250,000 first mortgage of which the Citizens' Trust Company is trustee; $8,000 balance due Henry C. Ballou on the price of a farm and $154,295 due the Vermont Products Company for pulpwood.

In his report Mr. Ferris says that the total claims amount to $1,358,201. However, $159,016 in claims were rejected leaving total unrejected claims of $940,020. There were 137 creditors, of whom 35 held claims for less than $100. Sixty-two creditors holding claims for a total of $865,857 agreed to the plan of reorganization. The plan is one by which the creditors take over the business.

To Make Improvements at Nashwaak Mills

The following press dispatch dated St. John, N. B., July 24, was printed in the New York *Times* Tuesday morning:

"The Oxford Paper Company and Bryant Paper Company of New York, joint owners of the Nashwaak Pulp and Paper Mills here, have decided to spend at least $500,000 in reconstructing the local plant to increase its capacity from sixty to eighty tons of pulp daily. Hugh J. Chisholm of New York, president of the Oxford Company; Felix Pagenstecher, president of the Bryant Company, and other officials left Boston tonight to inspect the plant and prepare plans for the reconstruction work."

It was impossible to verify this report at any of the mill offices of the concerns mentioned in New York before going to press.

To Protect Fish Life in Mill Streams

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 24, 1922.—An effort will be made at the next session of the State Legislature to secure an appropriation to be used for employing chemists who will make chemical analysis of waste from paper mills and other industrial plants that is now dumped into Wisconsin streams in order to find some way of neutralizing poisons, which, it is alleged, is destroying fish life. At a meeting of conservation leaders it was proposed that after a chemical analysis has been made and a remedy found, industrial plants shall at once make use of this remedy and that failure to do so be punished by a fine of $5,000 and $100 for each day that waste is dumped into streams.

Enrich Soil With Sludge from Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., July 24, 1922.—Farmers in the vicinity of Stevens' Point are enriching their thin, barren soil by applying "sludge" or waste from the John Strange Paper Company mill. This sludge is rich in lime which sweetens the soil in that territory. Experiments show an immense increase in productivity in treated soil. It was said at the mill that if the demand warrants a drier will be installed to remove the moisture from the waste which now is dumped on a large tract of land. The tract is covered to a depth of about six feet. No charge is made to farmers who wish to haul it away.

Paper Sales Show Decline for April

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 24, 1922.—The trend of printing sales and paper purchases in the United States during April showed a decided downward tendency from the high point reached in March, as indicated in the Graphic chart just issued by the general service department of the American Writing Paper Company of this city. It is expected that the May figures will show a considerable gain over April, and the trend from now on should be continually upward. The reports used in preparing the Graphic chart were submitted by representative printing and lithographing concerns located in various cities of 39 states, the District of Columbia, and the Hawaiian Islands.

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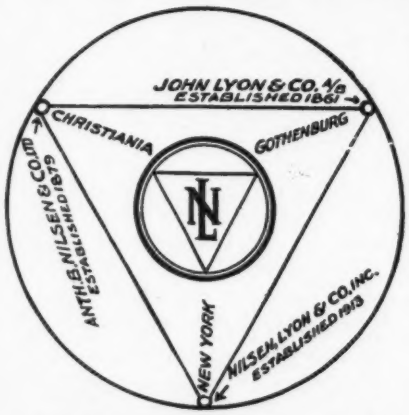

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Editorial

Vol. LXXV New York, July 27, 1922 No. 4
FIFTY-FIRST YEAR

Dictionary of Paper Terms

Owing to numerous requests for information regarding the "Dictionary of Paper Terms" which has been printed recently in this paper, the PAPER TRADE JOURNAL wishes to state that the publication of these terms will be resumed at an early date. The first installment of this matter appeared in the issue of June 1 and was temporarily discontinued in the issue of June 29 when the terms in A and part of P had been printed.

This matter obviously requires careful handling, and, unfortunately, the ones who are doing the editorial work were unable to finish in time to avoid the interruption in the publication. When the publication is resumed, however, it is hoped that it will be possible to carry it through to the end without another break.

In printing the definitions in the PAPER TRADE JOURNAL the installments have purposely been included in each issue in just four pages, so that these pages might be conveniently saved and the complete installments bound, if desired, in a temporary binder. Numerous subscribers have apparently been carrying out this plan, but have, unfortunately, lost some of their copies. The publishers regret that they have been unable to furnish these missing copies in the case of many subscribers and others who have requested them, as all of the back numbers of the PAPER TRADE JOURNAL containing the installments of the "Dictionary" are out of print.

Ultimately, however, it is intended to incorporate these definitions in Volume V of the Manufacture of Pulp and Paper, the series of works now being published by the Joint Educational Committee of the Pulp and Paper Industry of the United States and Canada and thus make it a permanent addition to the literature of the industry which has long been needed. In the meanwhile constructive criticism of the work as it is appearing jointly in the *Pulp and Paper Magazine of Canada* and the PAPER TRADE JOURNAL will be appreciated, so that when finally printed in its permanent form the Dictionary may be as nearly perfect as it is possible to make it under all the circumstances.

Such criticisms and suggestions should be sent to Mr. J. Newell Stephenson, editor of the *Pulp and Paper Magazine of Canada*, Gardenvale, Que.. under whose editorial direction the series of text books on the Manufacture of Pulp and Paper is being published by the Joint Educational Committee.

Why Paper Needs Protection

The monthly average import price per pound of news print for May according to figures just issued by the Department of Commerce at Washington was $0.0347 as compared with $0.0342 for April and $0.055 for May of last year. As may be observed this indicates that the price of foreign news print is stiffening slightly although it continues very much lower than a year ago.

Current advices from Germany state that the price of news print there has been raised recently and that additional increases are expected almost immediately. This fact as well as labor troubles in the printing trade there has caused considerable quantities of printing paper to pile up for which foreign markets are longingly looked to, it is stated, especially in view of the more complete demoralization of the mark and the greater value of the American dollar in exchange.

In the light of these circumstances the information just at hand that the officials at Washington, who have for some time past been investigating the situation, have found no evidence of "dumping" foreign news print here, is of more than usual interest. If there has been no "dumping" there has certainly been a considerable quantity of foreign paper coming to America which has seriously disturbed the American market and has served as no slight handicap to American paper manufacturers in employing their workmen on as full time or at as satisfactory wages as they would like to. This is something that the law makers at Washington should seriously consider in shaping the new tariff bill. The American paper industry must have adequate protection from the present irresponsible foreign competition if it is expected to prosper as it should.

The average import price per cord of pulpwood for May was $10.28 as compared with $10.65 for April and $14.68 for May a year ago.

The average import price per ton of mechanical pulp for May was $26.86 as compared with $30.27 for April and $34.14 for May of last year.

The average import price per ton of unbleached chemical pulp for May was $57.17 as compared with $57.42 for April and $85.56 for May, 1921.

The average import price of bleached chemical pulp per ton for May was $85.47 as compared with $87.21 for April and $114.60 for May of last year.

The average export price per pound of news print for May was $.048 as compared with $.046 for April and $.07 for May of last year.

The average export price per ton of wood pulp for May was $55.64 as compared with $52.95 for April and $69.40 for May of last year.

Dr. Baker in Europe

It was a happy thought to send Dr. Baker to Europe. The paper and pulp industry cannot fail to profit from the observations that the secretary of the American Paper and Pulp Association is making in the well known centers of paper making abroad. This is well evidenced from his extremely interesting letter from the Scandinavian countries printed elsewhere in this issue of THE PAPER TRADE JOURNAL. Fortunately Dr. Baker is not only a trained observer but is able to impart through the written word what he sees as though the reader were actually on the journey with him. He would doubtless like to write personal letters to all his numerous friends in the industry but this obviously is not possible. These letters in the trade press cannot fail to serve as good a substitute and certainly more favorable ones than if they came from the pen of a less experienced traveler or one less skilled in the art of putting his thoughts on paper.

The hospitality with which Dr. Baker was received by the Swedes and their courtesy in showing their plants even to a man of the

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prominence in the American industry of Mr. George W. Sisson, Jr., who accompanies him, is not surprising. Those of us who have simply met them on business trips here cannot fail to have been impressed with the thought that they would be delightful hosts at home.

Their industry which enables them to prosper in a land not so greatly blessed as many other countries by nature with means for subsistence also apparently made a deep impression on Dr. Baker as did the thorough application to their work which enables them to turn out some of the high class qualities of paper and pulp for which they are noted. Dr. Baker, it will be remembered, is a schoolmaster and it may be expected that he will have considerable to say on these topics to the American paper and pulp manufacturers on his return. It has been believed for some time past that we have been too easily content with simply scratching the soil, as it were, and not willing enough to do the intensive cultivation which Europe has been compelled to do for a long time and which has given her numerous advantages that are bound to be more pronounced in the next few years. After reading Dr. Baker's letter in this issue every one connected with the industry will hope that he will write long and frequently during his trip.

Demand Increased for Canadian News Print

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 24, 1922.—A remarkable stimulus has been given to interest in the news print industry here by the possibility of an early increase in price, consequent on the announcemet by the International Paper Company of a new price of $75 per ton. This has been reflected in increased activity in pulp and paper securities on the Montreal Stock Exchange. As previously intimated most of the news print mills here are under contracts for the balance of the year at approximately $70 per ton. At present, therefore, the International Paper Company's price is important only as showing the real strength in the position of the mills, and as forecasting an advance at the beginning of the new year. The firming of the price means that any surplus in the market through the heavy increase in production during the past two years has been caught up. It is estimated that on the basis of around 1,000,000 tons a year the Canadian mills will receive an increase in net earnings of $5,000,000 in 1923. Spanish River, with 650 to 700 tons a day as the maximum output, will benefit to the extent of at least $3,250 a day by a $5 increase, or around $1,000,000 in the year, which is equivalent to 6 per cent on both preferred and common stock. Abitibi with approximately 500 tons a day output will benefit to the extent of $2.500 a day, or $750,000 a year, representing $3 a share on the 250,000 shares. The other larger companies will benefit as follows: Laurentide, with 325 tons daily, $487,500 a year; Price Bros., with 300 tons daily, $450,000 a year; Brompton, with 110 tons daily, $165,000 per annum; Donnacona, with 100 tons daily, $150,000 for the year.

Strathmore Paper Co. Makes Improvements

[FROM OUR REGULAR CORRESPONDENT.]

WORONOCO, Mass., July 24, 1922.—Workmen are now busy constructing the fourth floor of the new finished paper storage building at the No. 2 mill of the Strathmore Paper Company. During the first two weeks in August the No. 2 mill will be shut down for repairs and a further addition of six dryers will be made to the 106-inch Fourdrinier machine.

Since the installation of the Woodsome system for removing water by condensation from the dryers, the production of paper has been greatly increased and with the addition of six dryers, it will be further increased.

Wortendyke Mfg. Co. to Make Improvements

[FROM OUR REGULAR CORRESPONDENT.]

RICHMOND, Va., July 24, 1922.—Plans for extensive improvements in the factory of the Wortendyke Manufacturing Company, of Richmond, to include the erection of a four or five-story L-shaped building which will cost $100,000 or more, are being seriously considered, and three or four contractors are figuring on the work for the management.

Lewis G. Chelf, vice-president of the company, confirmed the reported plans of the company. He said that the company has been trying to get possession of the property next its present holdings for the last fifteen years. This land was recently purchased from James Sloan, who bought it only a few days ago from Henry Walters, chairman of the board of directors of the Atlantic Coast Line Railroad.

The building proposed will run back from the present building eighty feet to the canal, and will extend from this point 160 or 200 feet in an easterly direction, giving the company an immense new addition to its present plant, the magnitude of which cannot be visualized until it is realized that there will be four or five stories in the building. The property carries perpetual water power rights with it. Four or five concerns are making estimates on the cost. Mr. Chelf had no idea concerning the expense of the proposed structure.

The Wortendyke Manufacturing Company has been in business in Richmond since 1889, manufacturing a very high grade line of paper bags, toilet paper, paper towels, and fiber twines. The officers of the company are:

Thos. F. Jeffress, president; L. G. Chelf, vice-president and treasurer; Ernest B. Livy, second vice-president, and Luther C. Jeffress, secretary.

Johnston-Albershart Buys Leedom Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

CINCINNATI, Ohio, July 24, 1922.—The Johnston-Albershart Company has purchased the C. A. Leedom Paper Company, of Springfield, Ohio. The company will continue to use the present quarters of the C. A. Leedom Paper Company, 108-110 West Columbia street, at Springfield, and will have a stock of its papers on hand at all times in Springfield.

C. A. Leedom, who has called on that trade and handled that territory for many years, will continue to have charge in Springfield, and will also cover Dayton and Columbus.

Keyes Fibre Co. Increases Wages

[FROM OUR REGULAR CORRESPONDENT]

WATERVILLE, Me., July 24, 1922.—Dr. George G. Averill, treasurer of the Keyes Fibre Company, manufacturer of paprus pie plates, announced an increase of wages last week for the female employees of the local factory. The prevailing wage has been increased 10 per cent for day work and about 25 per cent for night work, effective July 17. The output of the local factory is increasing and the business is prospering. Keyes Fibre Company, plates go to practically every country in the world.

Paper Rate Hearings to be Held in New York

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., July 19, 1922.—The Interstate Commerce Commission has announced that a hearing will be held in New York city on July 21, before Examiner J. E. Smith of the commission in case 13,722 of the West Virginia Pulp and Paper Company against the director general. A hearing will also be held in New York before the same examiner on July 24, in case 13,723 of the United Paper Board Company against the M. F. E. railroad.

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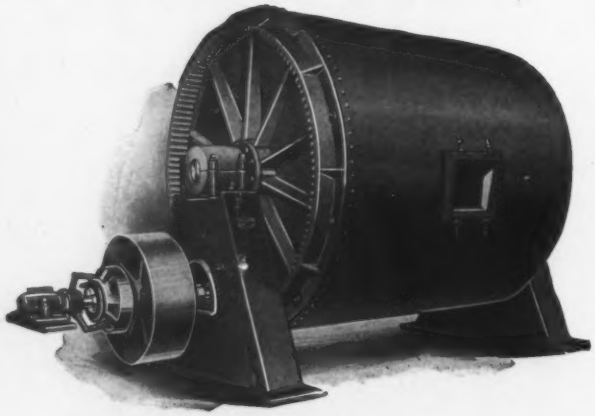

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TRENTON, N. J.

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

PAPER TESTING METHODS

Microscopical, Chemical, and Physical Processes Described with an Account of the Apparatus Employed

By Committee on Paper Testing, Technical Association of the Pulp and Paper Industry

(*Continued from Last Week*)

8. Folding Endurance

*a. Description** (53). The folding endurance of a paper is measured on a machine in which a strip of paper of definite width and length is clamped. The clamps are held apart under definite tension and the paper is caused to bend back and forth upon itself, until the fibers wear through at the line of folding. The number of double folds is recorded automatically.

The folding strength of paper is dependent not only upon the strength and durability of the paper, but also is very largely influenced by the relative humidity. To perform this test in the most accurate manner it is therefore necessary to keep the relative humidity constant for all tests. This can only be done by making the test in a room where the humidity is under control. Where such a room is not available then note must be made of the per cent relative humidity of the air at the time of the test. No tests should be attempted when the humidity is either very high or very low. A relative humidity between 65 and 70 per cent is more easily attained throughout the year and is the standard humidity recommended by the paper testing committee.

The folding factor is determined by the following formula:

$$\frac{\text{Folding endurance}}{\text{(weight 25x40, 500)}} = \text{Folding factor.}$$

The folding factor will vary between about 0.1 and 200.

b. Calibration. The machine illustrated was designed at the Bureau of Standards for the purpose of calibrating the springs acting on the clamping jaws. It consists of a stand on one end of which the tester can be screwed firmly. On the other end is provided a support, with leveling screws, on which may be mounted a wheel provided with knife-edge bearings. Around the rim of the wheel is a groove of about ¼ in. deep. This wheel should be made of three plys of wood, glued to prevent warping, and should be so balanced that when mounted on the supports with the back of the knife edge horizontal, it will remain in any position within 45 degrees either side of this without tending to rotate. The table on which the folding tester is mounted should be made large enough so that the machine can be set up with either jaw facing the large grooved pulley. The relation between the height of this table and that of the bearings for the knife edge supporting the grooved pulley should be such that a fine piece of thread resting on the base of the groove in the pulley and attached to the center of one of the clamping jaws, the other clamp being removed entirely, will form a horizontal line. After the jaws have been properly marked for maximum extension according to Reid, Veitch and Sammet, one of the jaws with its spring holder and stand should be removed entirely from the machine and the latter should then be mounted with the end without the jaw and spring toward the grooved pulley. A thread or very fine wire should be attached to the center of the clamping jaw, passed through the reciprocating slot (the latter being locked in its neutral position) over the wheel, and tied to a 1 kg. weight so that the latter swings free, and the thread falls entirely in the plane of the groove in the pulley. If the reciprocating part be locked in its neutral position and the alignment of the machine and pulley be carefully made, it will be unnecessary to remove that part of the machine which carries the four small rollers and through which the reciprocating part passes. After setting up, care should be taken that the thread holding the weight does not touch any part of the folding tester and that the square shank of the jaw is entirely free from any contact with the sides of the square opening into which it fits. If the spring tension is correct the jaw will be drawn out by the action of the 1 kg. weight so that the mark previously made to the square shank will be just visible. If this is not the case the spring tension should be adjusted by loosening the small set screw holding the knurled collar on the end opposite the jaw, after which the tension is adjusted by revolving this knurled collar. The other jaw should be adjusted in the same way after reversing the machine, removing the jaw just calibrated and replacing the other.

c. Accuracy. In view of the fact that the folding test is practically confined to a test strip 15 mm. long and about 0.25 mm. wide, that wearing parts tend to make it difficult to maintain uniform conditions of the tester and because of the very marked effect of changes of relative humidity, it is probable that the variations between averages of ten tests, either on the same machine or on

Note—In connection with the folding tester, attention should be called to the fact that it is absolutely essential that the small steel wheels supporting the clamping jaws be perfectly round, well oiled and revolve easily, as the jaws move back and forth. In one case the fact that one of these did not revolve caused an error of 25 per cent in the results.

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different machines, will vary from five to fifteen per cent under ideal conditions and that this variation will be considerably greater under the normal testing methods. It is recommended that an average of not less than ten tests on the sample in one direction be obtained to indicate the folding endurance in that direction.

Green Folding Tester

This folding tester was originally devised to apply to pulp sheets made either in the hand mold or by means of the standard pulp sheet mold. The folding tester is, therefore, applicable to any sheet product, irrespective of bulk or tensile strength. It consists of two planes of hardened steel, ground true, which abutt along a straight line, accurate to ground fit. These two planes have a slight inclination downward from the line along which they abutt. They are pressed together along this line by means of springs, set to a specified tension. Running over these planes are two rollers, each parallel with the line along which the planes abutt, set a fixed distance apart, and pressing downward on the planes by a known force, which is fixed by the adjustment of springs. By means of constant speed electric drive, the rolls are run backward and forward across the line along which the two inclined planes abutt and the specimen under test is held between the planes under known and constant pressure. There is an automatic counting attachment which registers the number of double folds of the specimen. The end point is the moment when the specimen has been severed at its center, not when it has been severed entirely.

9. Tensile or Breaking Strength

a. Description. The tensile strength of paper is determined by the load, in pounds, required to break a strip of paper. The tensile strength machine, best known in the paper industry, is the Schopper tensile machine.

In this device a strip of paper 15 mm. (approximately 19/32 in.) wide by 180 mm. long (approximately 7 3/16 in.) is clamped at each end and the clamps are moved apart until the strip is broken. A suitable device indicates the pull in kilograms (approximately 2.2 lbs.) required to break the strip. As the English units of measurements are used on all other tests, it is recommended that the load in kilograms per 15 mm. width strip, be converted into pounds per inch of width by the following formula:

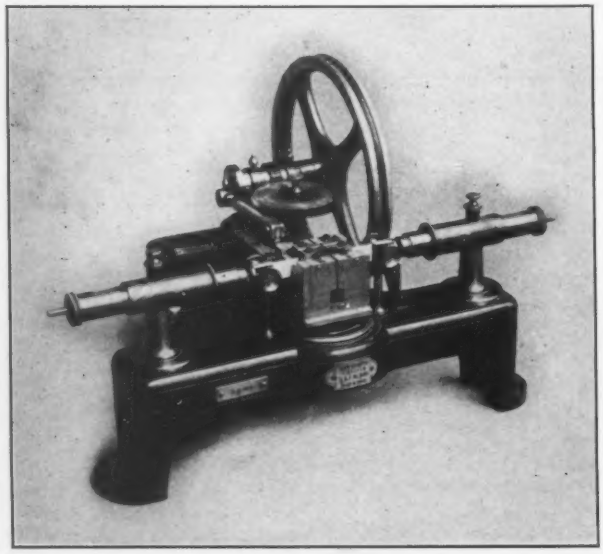

PLATE No. 27 FOLDING TESTER

A device for determining the folding endurance of a strip of paper 15 mm. wide under a tension of one kg. (Foreign Paper Mills, Inc., New York)

(3.73) × (Tensile strength in kg. per 15 mm. width) = Tensile strength in lbs. per one inch width.

A tensile strength factor may be determined by the following formula:

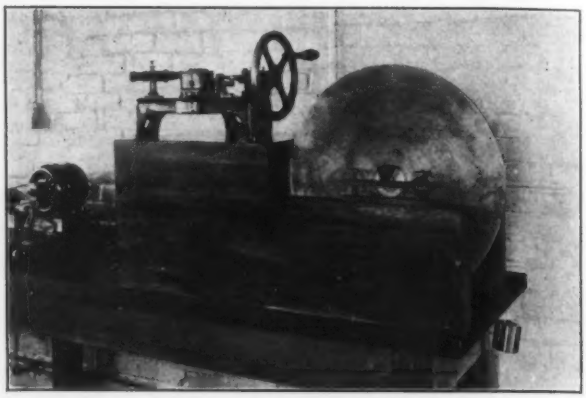

PLATE No 28 CALIBRATING DEVICE

An arrangement designed for the purpose of calibrating the spring tension of the Schopper folding tester. (Bureau of Standards, Washington, D. C.)

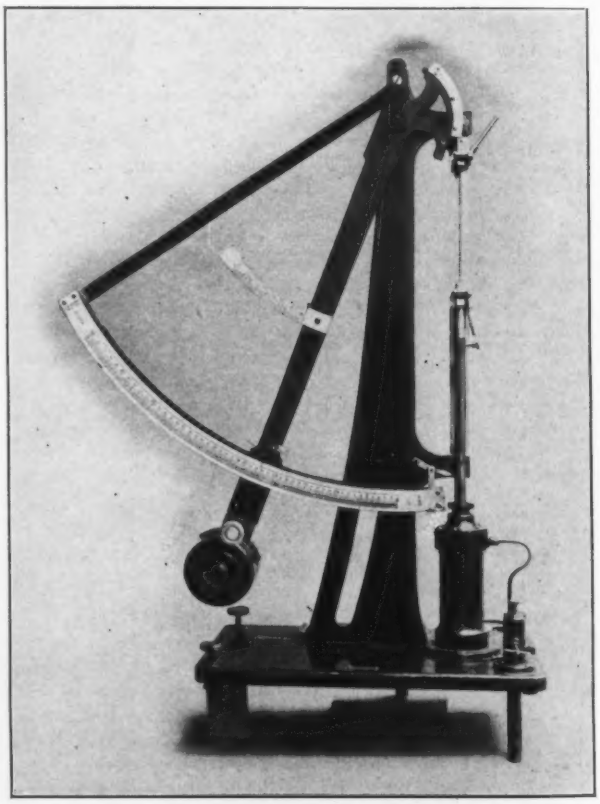

PLATE No. 29 SCHOPPER TENSILE TESTER

Tensile tester operated hydraulically with device for determining the elongation of the paper. (Foreign Paper Mills, Inc., New York).

$$\frac{\text{(Tensile strength in lbs. per in. width)}}{\text{(Weight 25x40, 500)}} = \text{Tensile strength factor.}$$

The usual factor for tensile strength is known as the breaking

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length. This is the length of a strip which, if suspended at one end, would break of its own weight. The following formula may be used to determine the breaking length of a sample:

$$\frac{\text{(Tensile strength per 1 in. width)} \times (13{,}889)}{\text{(Weight of a sheet 25x40, 500)}} = \text{Breaking length in yards.}$$

$$\frac{\text{(Tensile strength per 15 mm. width)} \times (13{,}899 \times 3.73)}{\text{(Weight 25x40, 500)}} = \text{Breaking length in yards.}$$

The breaking length factor will range from a maximum of about 11,000 yards down to approximately 2,000 yards.

In this test certain precautions should be observed in order to get accurate results. The width of the sample, the rate of applying the load and the alignment of the sample in the jaws will affect the test. Care should be exercised that the test strip should be cut accurately to the prescribed width and that it should be cut accurately parallel to either the machine or cross direction of the paper. It is recommended that the lower jaw be moved at a rate of 12 inches per minute for the 50 kg. tester. The test strip should be carefully inserted in the jaws, so that the pull is straight, since otherwise, a tearing strain will be introduced that will produce an

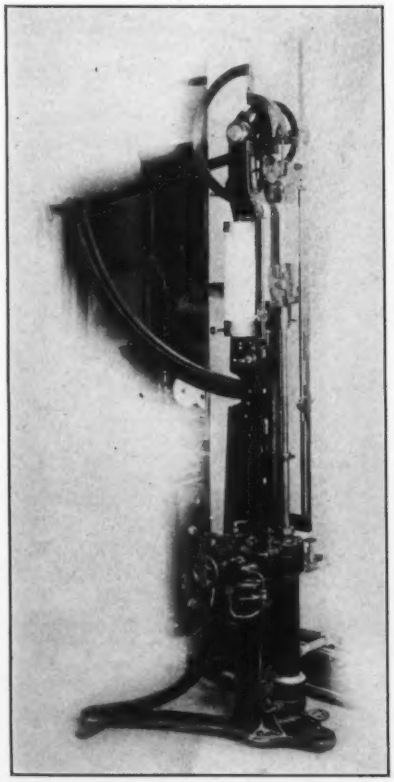

PLATE NO. 30 STRESS STRAIN TESTER

A hydraulically operated 200 kg. Schopper tensile tester with recording drum to indicate the stretch on the repeated load. (Bureau of Standards; Foreign Paper Mills, Inc., New York).

error. It is further recommended that the tester should be calibrated and, if necessary, a correction curve and formula be derived.

*b. Wet Tensile** (122). This test may be performed on the same apparatus as for the dry tensile strength with certain modifications. Due to the weakness of paper when wet, it is desirable to make the apparatus more sensitive and this is done by removing the weight at the bottom of the moving arm, calibrating the tester under this new condition and obtaining a correction curve or factor for conversion. It is recommended that a speed of 6 ins. per minute be applied to the lower jaw and that this be kept uniform. It is recommended that before testing, the strips shall be immersed in water

PLATE NO. 31 PERKINS TENSILE TESTER

A tensile tester recently brought out by B. F. Perkins & Son, Holyoke, Mass.

at 70 degrees F. for twenty minutes and that these conditions be rigidly observed, as the test is markedly influenced by both the temperature of the water and the time of immersion. Since the test strips, after wetting, are easily injured and are difficult to place in the jaws in true alignment, extra care is necessary.

*c. Stress Strain** (20). In connection with the determination of the breaking strength of heavy bag papers, it has been indicated that a study of the stretch due to repeated application of load is of considerable importance in indicating the quality of the sample for this purpose. The tensile strength of the paper is determined, using a strip one inch wide and 12 ins. long, the load being applied at the rate of 12 ins. per minute. By means of a recording device, shown in the accompanying photograph, the stretch of the sample under repeated loads (ten per cent less than the average breaking strength) is indicated and it is possible to determine the stretch, regain and elasticity of the sample by this method.

d. Elongation at Rupture. Most of the tensile test devices are equipped with a secondary scale to indicate the stretch or elongation at the time of rupture. This secondary quadrant has two scales and gives the stretch in millimeters or, if a test strip of 180 mm. between jaws was used, in percentage stretch. Data available seem to indicate, however, that this elongation at rupture has little significance in evaluating a test sample.

10. Absorption

*a. Strip.** (6). The absorption of a blotting paper is indicated by the height in millimeters to which, in a given time, a liquid will rise by capillary action, when one end of a strip of paper held

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vertically is immersed in water. The height in millimeters to which the liquid (preferably water) will rise in ten minutes is taken as a measure of the relative absorption of the paper.

In making this test, using the "strip" method, a strip of blotting paper 15 mm. (about three-fifth in.) wide and 150 mm. (about 6 ins.) long is suspended, so that the lower end dips 3 mm. (about one-eighth in.) into a pan of distilled water. Besides the strip is a scale reading in millimeters (fractions of an inch), and at the end of each minute for 10 minutes readings are taken of the height to which the liquid rises in the strip. Five tests are made in both the "machine" and "cross" direction and an average obtained. The result is reported as the height to which the liquid will rise in 10 minutes. When necessary, or advisable, the same strips may be subjected repeatedly to the test, which will indicate the decreasing ability to absorb water or ink. In addition, a standard ink of the following formula may be used:

	Grams
Tannic acid (dry)	23.4
Gallic acid (crystals)	7.7
Ferrous sulphate (crystals)	30.0
Dilute hydrochloric acid (U. S. P.; sp. gr. 1.049; 10% HCl by weight	25.0
Phenol	1.0
Bavarian blue, S. & J. No. 478 or similar suitable dye	2.2
Water to make a volume of 1000 cc. at 15.6° C.	

Note—Any water-soluble basic aniline blue, as Niagara 3B, National Aniline Company, may be used in place of Bavarian blue.

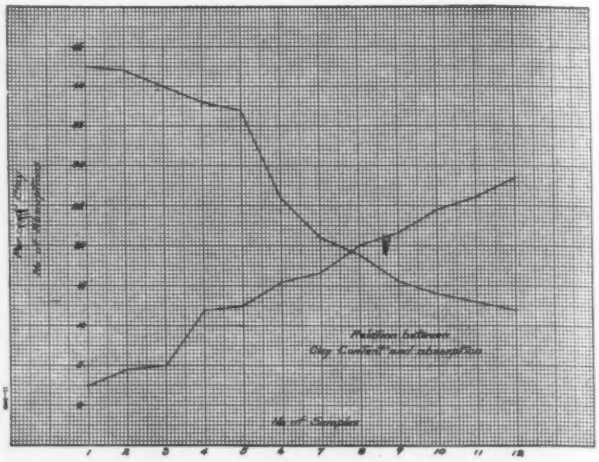

PLATE No. 33 RELATION BETWEEN FILLER AND BLOTTING QUALITY

Curves representing the variation of a practical blotting test with the percentage of clay in the paper

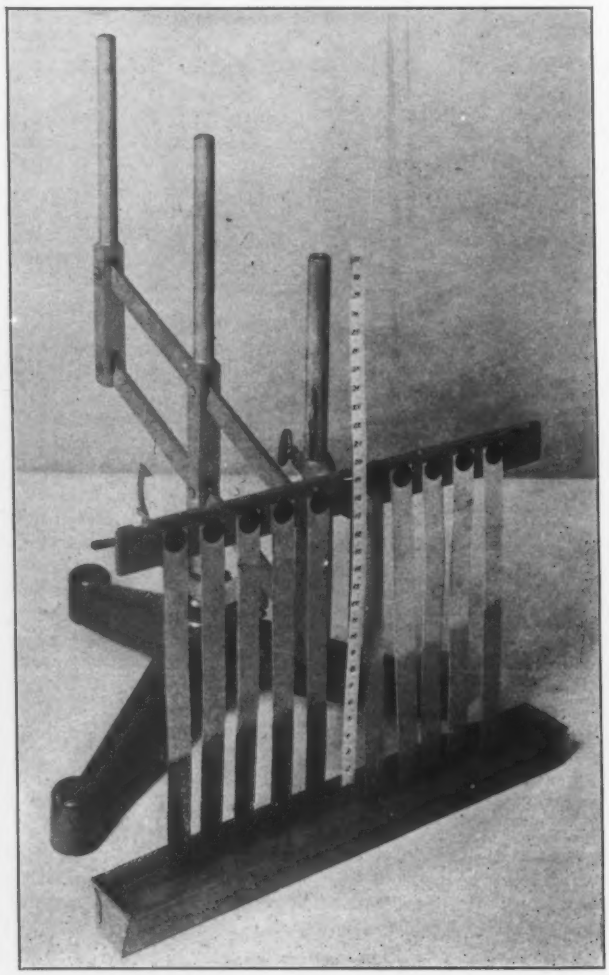

PLATE No. 32 ABSORPTION TEST

A convenient method of making a number of absorption tests of blotting paper by the Klemm method. (Bureau of Standards)

*b. Pipette** (13). In this test a one cc. pipette is employed and is suspended in such a way that the end of the pipette is one-half inch from the surface of the test sample of blotter. The test sample cut four inches square is laid felt side up upon a coarse wire screen, which is supported by a large beaker. This is done to prevent as far as possible the blotting paper from caving in at the center where the liquid fell upon it. (The felt side of paper is the top side of the paper as it leaves the paper machine wire.) Both distilled water and the above mentioned government standard ink are used at the three temperatures of 60, 70, and 80 degrees F.

A stop watch is used to measure the time it took the one cc. of liquid to leave the pipette until it is totally absorbed by the paper. Also the diameter of the circular spot on the paper was measured immediately at the completion of the time reading. Table III shows the results which are the averages of five tests.

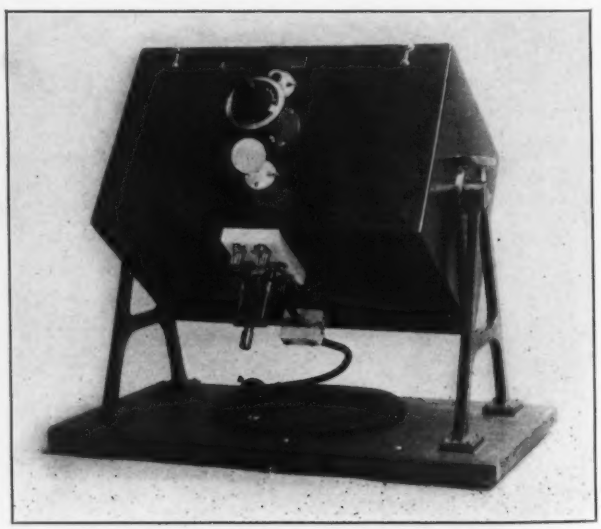

PLATE No. 34 OPACITY APPARATUS

A device for measuring the opacity or translucency of paper by contrast-ratio method. (Bureau of Standards)

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*c. Total Absorption** (23). By means of this test, test samples cut two inches square are first weighed on a chemical balance and then dropped with the felt side down on a trough of distilled water and also on a trough of government standard ink. The same temperatures are used for the ink and water as in previous absorbency tests. After a ten-minute period of absorption, the samples were taken out, drained one-half minute and again weighed to determine the amount of liquid absorbed.

*d. Blotting Test** (23). In this test, small strips of blotting paper cut one-half inch wide by four inches long are used to blot signatures that are written with a stub pen on ordinary bond paper. The same signature is used throughout the test and only one signature is blotted at a time. The small size of the test sample causes each blot to be made on almost the same identical spot in the blotting paper. Government standard ink is used as in previous tests and a record is kept of the number of times each test sample will blot the signature before the ink shows signs of spreading on the paper. The felt side of both blotting and bond paper is used throughout the tests, and an average of three tests is taken as a final result for each blotting paper.

It is interesting to note in the accompanying curves that there seems to be an inverse proportion between the amount of ash of the paper and the number of times that the test strip may be used before the ink begins to spread.

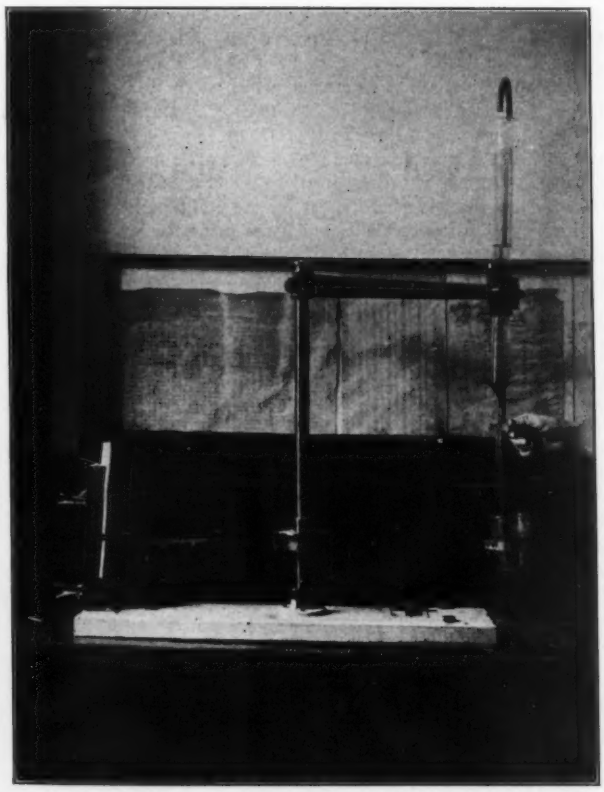

PLATE NO. 35 WITHAM TEARING TESTER

An early type of tearing tester developed for the use of testing bag paper. (G. S. Witham, Sr., Hudson Falls, N. Y.)

11. Opacity and Translucency* (142)

The opacity or translucency of a paper may be measured by the "contrast ratio" method as described in Bureau of Standards Circular No. 63.

The Bureau of Standards has developed and adopted a standard method for determining the transparency of paper and tracing cloth, which is described in detail in Circular No. 63. Briefly, this method consists in placing a sample of the paper or cloth to be tested over two adjacent surfaces, one white, and the other black, and measuring the reduction in contrast of the appearance of the two surfaces. If the material in question is quite transparent, the contrast between

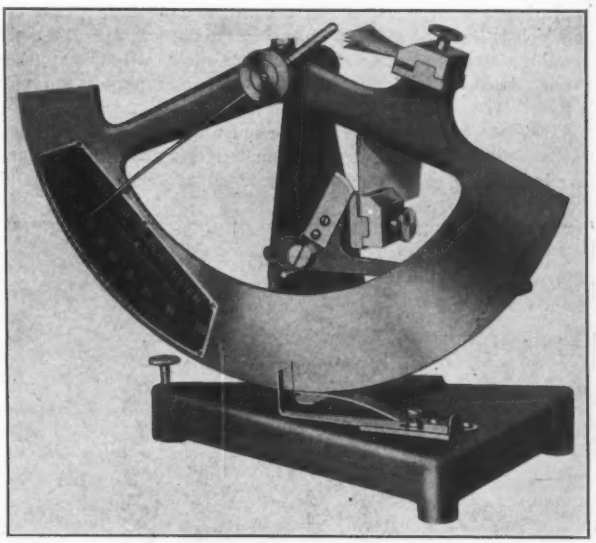

PLATE NO. 36 ELMENDORF TEARING TESTER

A pendulum type of tearing tester which measures the work done in tearing several strips of paper. (Thwing Instrument Company, Philadelphia, Pa.)

the black and white surfaces, as seen through the material, will be quite noticeable; but if the material is opaque, none of the light incident upon its surface will be transmitted and absorbed by the black surface beneath, and consequently, there will be no contrast between the parts of the material covering the black and white surfaces.

In making the measurements, one must use a photometer having a divided photometric field, one-half of which is illuminated by the light coming from the material over the white surface, while the other half is illuminated by the light coming from the material over the black surface. The two halves of the photometric field are then "matched" by usual observation and properly setting the photometer, and the indicated results recorded. A slight computation based on these observations, gives the numerical measurement sought, which is called the contrast ratio. It varies between zero and unity, larger values indicating less transparency.

12. Tearing Test

A continued and increasing interest in the determination of the tearing strength of paper by some mechanical means has produced various devices for this purpose. A brief description of several is given, but there is not as yet sufficient data available to make any recommendations in regard to those which are most satisfactory.

*a. Knife Edge Method** (133). In the tester perfected at the A. D. Little, Inc., Laboratory, the sample to be tested is clamped to the baseboard of the instrument. The clamp has a knife edge along one side and the paper is torn along this edge. The tear is first started slightly and the end of this strip is clamped to the movable arm which is connected to a bellows arrangement with a pressure gage. The arm, bellows and gage are mounted on a movable carriage, operated on an inclined track by means of a lug screw. As this screw is made to revolve, the carriage moves up the incline and, as one end of the paper is attached to the movable arm,

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the tearing is accomplished. The force necessary to tear the paper is determined by the pressure shown on the gage.

b. Witham and Case Testers. Both these testers are based on the principle that the force necessary to tear the sample is applied by running water into a beaker which may be connected to the sample in any one of several ways. In the Witham tester* (136, 148), this load is applied by means of running water from a burette into a beaker, set on one end of the pivoted arm, the opposite end of which is attached to the sample. In the Case tester* (128), the movable clamp is merely a spring clothes-pin, to which is attached a small bucket. Water is run into the bucket until the sample is torn.

*c. Schopper** (129). The heavy counter weight of the Schopper tensile tester is removed, the test sample is cut one inch wide and four inches long, slit down the middle about two inches, and one of

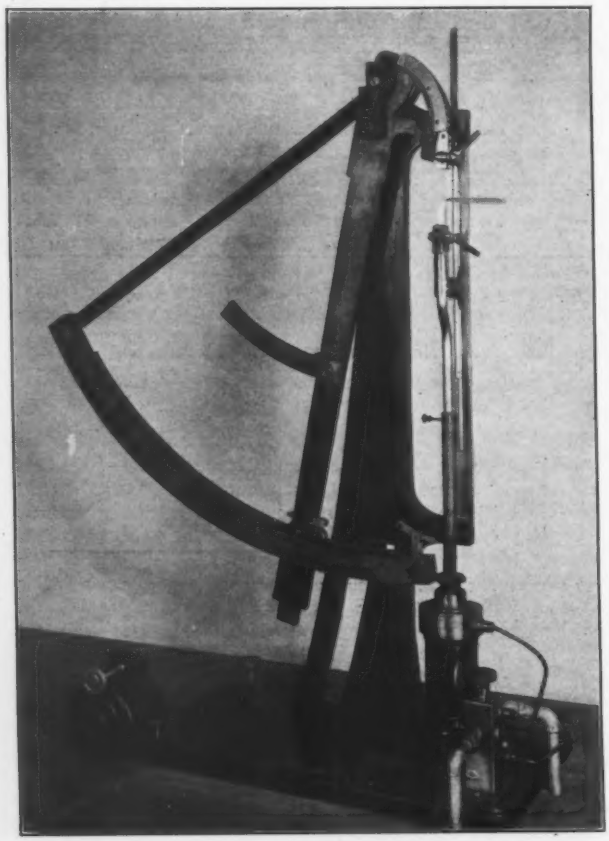

PLATE NO. 37 SCHOPPER TEARING TESTER *(129)

A tensile tester adapted for making tearing tests with the heavy weight removed and with an off-set lower jaw. (Foreign Paper Mills, Inc., New York).

the slit ends is placed in each of the jaws. The pawls on the rack are raised, the lower jaw lowered at a uniform rate and readings taken at intervals of ten seconds. As in the case of the wet tensile test, the tester must be calibrated for the new conditions and to avoid a rubbing effect when several plies are used, the lower jaw may be offset as indicated in the accompanying photograph.

*d. Elmendorf** (131, 134). The principle upon which this tester is based is the fact that the tearing force is determined indirectly by means of the work required to tear a sheet of paper. The moving segment of the instrument may be considered to be a pendulum, whose swing is retarded by the tearing of the paper. The tearing force is determined from the relation existing between work, length of tear and force. More than one ply of paper in the test sample is recommended and care must be exercised that the width of the test sample is exact and the placing of it in the jaws is carefully performed. The tester is calibrated for 16 plies of paper and if any other number is used, the necessary lactor must be applied.

e. Discussion of the Tearing Test. Available data seem to indicate that there are a number of factors which influence the results obtained in making this test by any of the above mentioned methods. These factors are: (1) width of sample and width of paper on either side of the tear, (2) the number of sheets or plies torn at one time and (3) the relative humidity at which the tests are made. Sufficient data are not available for conclusions to be reached in regard to these factors and it is, therefore impossible at this time to make any recommendations in regard to the efficiency or accuracy of these methods or to interpret the data obtained.

(*To be continued*)

Talc and Soapstone in 1921

The production of talc and soapstone in 1921 showed a great decline as compared with that in 1920. The quantity sold was the smallest since 1908 and was about 40 per cent less than the average for the five preceding years, according to Edward Sampson, of the United States Geological Survey, Department of the Interior.

The total quantity of talc and soapstone sold in 1921 was 126,000 tons, valued at $1,821,000, as compared with 211,000 sons, valued at $3,035,000, in 1920. This represents a decrease of 40 per cent in both quantity and value. Vermont, which since 1917 has been the largest producer, maintained its position by producing 38 per cent of the total quantity. New York produced 33 per cent of the quantity sold, but for the first time took second place in the value of its product. Virginia, which produced 14 per cent of the total, ranked next to New York in quantity, but for the first time led in the value of its output, owing to the fact that the soapstone industry in that State was not nearly so much affected as the ground talc industry, on which the other principal producing States depend.

The production and value by States was as follows: Vermont, 48,648 tons, $438,534; New York, 41,937 tons, $530,154; Virginia, 17,721 tons, $601,878; California, 8,233 tons, $128,188; Pennsylvania and New Jersey, 7,205 tons, $76,912; North Carolina, 731 tons, $17,048; Georgia, Maryland, and Massachusetts, 1,959 tons, $28,737.

The quantity of ground talc sold by producers in 1921 was 106,900 tons, valued at $1,821,000, as compared with 211,000 tons, valued at $2,143,000 in 1920. A canvass of the producers made to determine the quantity of talc consumed in 1921 by different industries shows that the paper industry used 38 per cent of the total and that the average value was about $10.60 a ton. Most of the supply was obtained from Vermont and New York. The paint industry, which requires a high grade of talc, used 23 per cent of the total. Nearly all the supply was obtained from New York, and the average value was about $14.10 a ton. The roofing industry consumed 18 per cent of the total and drew its supply almost entirely from Vermont. The requirements for talc used in this industry are not exacting, as is shown by the average value, which was only $8 a ton. The rubber industry used a large quantity of talc for filler, and in 1921 consumed 9½ per cent of the total. Vermont furnished most of the supply, which had an average value of about $9.50 a ton. The textile industry used about 4 per cent as a filler for cotton cloth. The average value was about $9.40 a ton. Only 2½ per cent of the domestic output was used for toilet powder, the demand for talc for that use having been supplied largely by imported material. California supplied most of the demand for domestic talc for this purpose and the average value was $18.60 a ton.

The latest figures available show that in 1920 the United States furnished about 65 per cent of the world's supply and consumed about 68 per cent.

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THE COLORING OF PAPER ON THE PAPER MACHINE

A Review of the Recent Patent Literature on the Subject, Indicative of European Practice

This article is an abstract of a much larger treatise on this important subject by the well-known German paper chemist, Dr. Emil Heuser, editor of *Der Papier-Fabrikant*. In the abstract there are given descriptions of the latest developments in the process of coloring paper on the paper-making machine, as depicted in the patent literature. These processes reflect European practice entirely, and particularly German practice. The article is accordingly of real practical value, as the coloring of paper on the papermaking machine is a German development.—Translator's note.

I. Coloring the Paper Web on the Paper Machine by the Addition of Solutions of the Coloring Matter

In Ger. Pat. No. 278,923, the Farbewerke vorm. Meister Lucius & Bruening, have patented a process of producing sporadically shaded paper or paper showing variegated spots which are highly colored in comparison with the rest of the product. This is accomplished by allowing dilute solutions of the coloring matters to flow over the top of the paper pulp, which lies in flake form on the wire of the paper machine. The waste pulp solution or back water that drains from the wire, containing considerable proportions of strongly or partly colored particles, is used over again. The coloring matter precipitates in the depressions and colors the corresponding part of the paper a deeper shade than the raised portions. In this manner a shading effect is obtained on the paper. When the back water is admixed with other color solutions or when other colored fibers are added, or particles of lake colors or mineral colors, then the shading effect can be heightened. The paper web can be provided artificially with high and low spots so as to accentuate the color designs on the same.

Coloring Paper on Both Sides

The same company has (see Ger. Pat. No. 268,243) a process of producing color shades on both sides of the paper. This is accomplished by subjecting the under side of the paper to the action of a roll, etched with a design or any other suitable arrangement, whereby the paper is impregnated with such liquids as alcohol, acetic acid, formic acid or other fat solvents which are soluble in water. This treatment is preliminary to passing the paper through the dye bath. When the paper is dyed, the color is absorbed very quickly and fixed in such a manner that exactly the same design in the same color tones appear on both the top and the underside of the paper. This ingenious process will produce a paper which has an accurate image of the colored design appearing on the top of the paper, on the under-side of the same, without the dye having to penetrate through the body of the paper itself. For this reason the process may be applied to the finished paper as well as to the paper in the course of formation on the paper-making machine. The process is improved in a subsequent patent (see Ger. Pat. No. 283,371, March 8, 1914). The improvement consists in the addition of hydroscopic substances, such as magnesium chloride, to the aqueous solution of the fat solvents. This has the effect of bringing out the designs in sharper outlines and in stronger colors.

Combined Coloring and Sizing Process

The process, which is described in Ger. Pat. No. 296,089, deals with the simultaneous coloring and sizing of paper in the presence of protective colloids. The peculiar advantage of this process is that the presence of these protective colloids enables the use of dyestuffs, which would otherwise be precipitated out of solution. This refers particularly to colors which would have this mutual effect on each other and permits the use of both acid and basic dyestuffs in a common solution. In a latter patent (see Ger. Pat. No. 297,535, July 19, 1914), the process is improved so that the paper is colored only, and not simultaneously sized. The protective action of the colloid protectors takes place in an exactly similar manner. The process is of considerable practical significance for certain particular types of paper, such as parchment paper. The newly discovered possibility of combining various coloring matters of entirely different properties makes it possible to produce new and surprising effects.

Mottled or Marbled Paper of Variegated Colors

Paper and cardboard can be given a marbled effect in variegated colors by means of the process described in Ger. Pat. No. 322,773. The practical method of carrying out this process is as follows:

This paper, which has the power of absorbing liquids and which in any case is sized on one side or else combined with a layer of sized paper, is subjected to treatment on the well-known color printing machine or through any other of the known methods of dyeing or color printing, where a mixture of three aniline colors is used, which as a general rule always differ somewhat in specific gravity or in solubility—such colors as blue, red and green. The colors are completely dried or almost so by means of air, so as to secure as uniform a product as possible. Then the colored surface is subjected to sporadic spraying with water. This may be carried out with the aid of different devices. One of the favorite ways of doing this is to spray the water through a stencil design. Effects corresponding to the design are produced. The form and size of the water spots are also a determinant factor in the design. The process can be carried out with hand labor.

The marbling of the paper can be effected later by careful, finely distributed spraying of the well-known marbling agents, such as shellac or by the immersion of the paper in a bath containing this material dissolved in volatile solvents.

II. Coloring the Paper by Means of Rolls

In Ger. Pat. No. 283,752 there is described a process of producing color effects on paper by means of color rolls. This paper, which is designed specially for documents, postage stamps, revenue stamps, etc., is made in the regular manner on the paper machine. The web of paper, which leaves the couch roll in the wet condition, before it is allowed to pass over the drying cylinders, is colored with the dyestuff by means of a ruling device in straight full lines, broken lines, dotted lines, undulatory lines or else in some definite design. The color penetrates into the wet paper and is absorbed therein before the paper reaches the drying cylinders. The result, obtained in this manner, is a paper with blotted, faint lines in the place of the sharp defined lines that are usually obtained. These lines can be produced just on one side of the paper only, or else by allowing the color to penetrate completely through, the underside of the paper is colored as well. The color is applied to the paper by means of rolls, which are etched in lines or designs. The lines can be reproduced on the paper either in the length or across the paper web. A small color wheel can also be moved back and forth across the width of the paper, as it moves through the paper-making machine, in the manner that a weaver's shuttle works. All sorts of special effects can be produced in this manner.

In Fig. 1 there is seen a four-drum paper machine, which is furnished with this coloring device. The paper web *b*, which is still in the moist condition, is led over the suction box *c* by means of the screen *a*. The web of paper is then passed between the couch rolls *d d* and finally reaches the felt *e*, by means of which the paper is led to the presses *f* and the other parts of the paper machine,

*Translated from the German in Der Papier-Fabrikant, March 19, 1922, 325-331. By Ismar Ginsberg, B. Sc., Chem. Eng.

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which, however, are not shown in this figure. Right behind the couch rollers *d d*, the ruling arrangement *h* is located. This is either a roll or a small color wheel which applies the dyestuff on the wet paper. The colors, which are absorbed into the paper, are reproduced in different kinds of lines or designs. The absorption of the color into the paper can be regulated so that any degree of blurring of the design can be secured.

The color roll can be located at different parts of the machine. One condition, however, must always be fulfilled—namely, that the color is applied to the wet paper, so that it can penetrate it and be absorbed by the fibers to produce a blurred effect.

Lucius and Bruening Process of Applying Color by Means of a Color Roll

This process is patented in Ger. Pat. No. 347,940. Solutions of the dyestuff or dyestuffs are allowed to flow over a rotating cylinder. Emulsions or suspensions of the coloring matters may be used as well. An uneven distribution of the color is required for the production of various color designs on the paper or on the pasteboard products. The cylinder is then brought in contact with the paper web. The solutions of the dyestuffs may contain additions of alcohol, glycerine, acetic acid, gum tragacanth, casein and other similar substances, or emulsions, lacquers, suspensions, for example, of bronze, mica, etc. Natural unevennesses in the paper or those produced artificially serve to diversify the character of the designs produced thereon under certain conditions.

The application of the color to the cylinders can be carried out in an irregular fashion, as for example by a more or less oscillating or circular motion of the color-applying device, or else the irregularity of the coloring can be produced on the cylinder itself, for example with the aid of etched rollers, trailing parts that trace out lines and figures, the influence of liquids and air pressure.

This process can be operated on the paper in both the wet and dry condition in the corresponding part of the paper-making machine. For instance, one of the drying cylinders in the paper-making machine can be used for this purpose, when the color is applied to that surface of the cylinder which is not covered with the paper. Similarly, a specially constructed cylinder can be located at any other part of the machine.

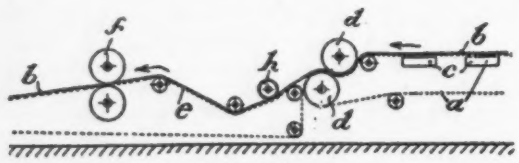

FIG. 1

The process can also be applied to finished paper, if the paper is first moistened sufficiently or treated in any way to render it properly absorbent. The necessity of this operation may be avoided when substances that are able of rendering the paper absorbent are incorporated with the color bath itself. These exert their action at the same time that the paper is being colored. This method of conducting the process is very effective.

III. Coloring and Producing Designs on Paper by Means of Differently Colored Paper Pulp

Such a process has been patented in Germany (see Ger. Pat. No. 266,236). The coloring and design effects are produced by means of at least two differently colored or embossed paper webs, which are produced independently of each other and which are superimposed on each other. One of these paper webs possesses the same design that is embossed on the other paper web, but cut out like a stencil, so that the design on the under surface paper will be visible through it and the whole will have the appearance of a single sheet of paper.

One of the many different ways in which this process can be carried out is shown in diagrammatic form in Fig. 2. The pulp, which flows out of the tank 1 on to the screen 2, is carried around on this frame-like screen, which is beveled in the center and which passes around at least four corners rolls, 3, 4, 5 and 6. Between the two rolls 4 and 5 the paper pulp is subjected to action of drops of a liquid which fall upon it at a sharp angle from the dropping device 7. The drops are ejected under pressure and when they strike the surface of the paper, the angle of the impact is very sharp. The effect of these drops is to produce a grouping of the fibers in the form of an oval with a compressed under-edge. On the other hand,

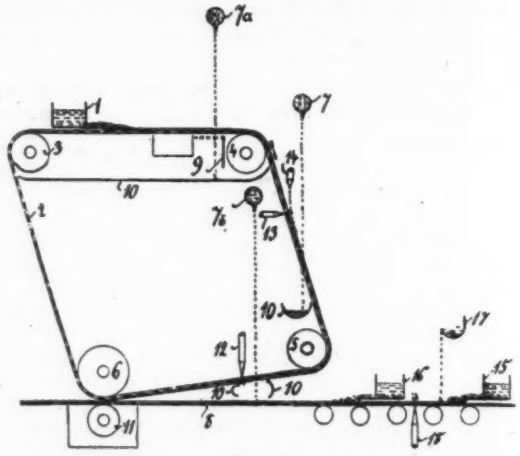

FIG. 2

if the dropping arrangement is located at the point 7a, so that the drops of water are ejected and fall on the paper web on the horizontal section of the screen between the rolls 3 and 4, where the layer of paper pulp is very thin, then the impression of the drop on the paper is circular in form and after the couching of the paper, this impression takes the form of a circle, which increases in thickness from the circumference towards the center.

Again, if the drops are allowed to fall on the paper as it passes between the rolls 5 and 6 from a dropping arrangement 7b, then the drops of water pass through the screen and in their passage through it they absorb a certain amount of paper pulp. These drops of pulp-entrained water may be permitted to fall on another paper web 8, which is specially prepared for this purpose and which runs horizontally under the regular web. The drops of pulp are then subjected to a couching action between the rolls 6 and 11 and are agglomerated with the paper web.

In the place of the drops of water, atomized water or air pressure can be used in this process. The atomized water and air pressure is applied through the nozzles 12 and 13. In this manner the desired splitting up of the fiber layer is accomplished or the centrifuging of the particles of the paper fiber. The action of the nozzles may be periodic in nature and likewise the nozzles may be given a lateral motion while they are operating. A resilient surface 9 is provided and located at the under surface of the screen which is free from paper pulp. This is used to attain special effects and is employed only when the dropping arrangement at 7a is employed. Catch pans 10 are placed at suitable points in the apparatus to catch the liquor which flows off from the screen and the paper web.

At 17 there is located a water-feeding device which overruns at periodic intervals and allows a little water to trickle down and wet the paper web. This device is arranged to secure special effects on the paper. The nature of these effects is dependent on whether the drops of water strike a horizontal web screen or one inclined at an angle to the horizontal. Other special effects are obtained when strongly diluted and differently colored paper pulp is allowed

to drop down on the paper web which is then subjected to the action of an air blast. Water and variously colored paper pulp can also be sprayed on the layer of paper fiber, which is carried past the nozzle on the wire, inclined a definite angle to the horizontal. Peculiarly displaced designs are produced on the paper in this manner.

Coloring of the Paper on One Side Only

When water is sprayed against the paper web on the under side of the screen, while the paper web is being subjected to the action of suction to remove the water, then breaks of a serrated outline are obtained in the fibrous structure. If the fibers resulting from the disturbance of the paper web by means of a pressure arrangement, which is located at the under side or inner side of the screen—for example, by means of air pressure or a liquid under pressure applied through the nozzle 13—which fibers are partly raised off the surface of the screen, if these fibers and groups of fibers are sprayed with color solutions through the atomizing nozzle 14, so that the color strikes the fibers at a sharp angle, then the paper web is colored on one side only. After the paper has been couched, the design made by these fibers appears to lie right on the surface of the paper. The water which has penetrated through the paper web and paper pulp entrained therewith can be recovered by means of a current of air and thrown back again on the screen. When this is done, the design produced on the paper is more indistinct. Then when two such paper films of different colors, which has been subjected to this action, are placed one on top of the other to form a paper web, then the marbling effect on the paper is three-colored.

Producing Cloudy Effects on the Paper

Peculiar marbling effects are secured by periodic spraying of diluted, variously colored paper stocks through pressure tubing, arranged at different angles with respect to the paper web. The spraying is carried out on different sides of the paper from movable nozzles and with the use of a reflecting surface, which is firmly fixed right back of the wire. Likewise, peculiar disarrangements of the layer of fibers is obtained by means of different movable air-pressure and water-pressure nozzles, which are arranged in various positions with respect to the paper web.

Production of a Tiger Skin Effect on the Paper

This effect is obtained by the use of water pressure nozzles, which are suspended in pendulum fashion over the oblique part of the screen so that they make a sharp angle with the paper web. The action of these water pressure nozzles is periodic. The same effect may be secured with the aid of a roll, which is provided with longitudinal felted stripes and which presses against the paper web, as the latter is passed between it and a couch roll. Other means for breaking through the fibers or shifting them to one side, so as to produce various marbled effects in the paper, are rigid textile fabrics, cord nets and rolls, which are enveloped in felt; furthermore, pieces of whalebone, arranged on a roll or in strips and similar cutting or rotating devices are also used to produce the same effects.

Stenciled Design on Paper

Various designs of regular form are reproduced on the paper web by means of stencils which, for example, may be made out of rubberized cloth. These are located directly under the length of the screen, covering its entire upper surface. Through these stencils, the pressure fluid is allowed to act on the paper web, so as to produce a regular design on the paper. The stencils can be arranged in an endless chain, moving over the surface of the screen. They may move faster or slower than the screen itself or they can be moved from side to side. When the stencils are used, it is also possible to use a suction roll or drum in the place of the pressure devices to produce a definitely designed disturbance of the layer of fibers. When a pressure roll is employed, it can take the place of a guide roll (either 4 or 5) at the same time.

A layer of fibers, which has been couched from the wire on the felt, can be worked up in such a manner that the felt plus the layer of fibers run over a suction roll, which is provided with slits, through which the fiber is sucked through the felt in strips. Now, if atomized water under high pressure is allowed to act on the layer of fibers at a sharp angle, then the fibers, which have not been sucked through, are moved together. A design which is produced on the paper in this manner shows thickened edges on one side.

Various Colored Marbling Effects

Variegated colored marbling effects can be produced by the use of a number of different screens, on which several layers of fibers are formed and then superimposed one on the other to form the paper web. Circular screens are also suited for this purpose. The screens must not be allowed to dip into the paper stuff too far in carrying out this process.

Double Marbling with Fourdrinier Wire

The figure, see Fig. 2, also shows how the fourdrinier wire is used in the process to produce double marbling effects on the paper. The paper stuff, which is designed for the layer of fibers which will be disarranged, flows out of a feed trough 15 on to the wire 8.

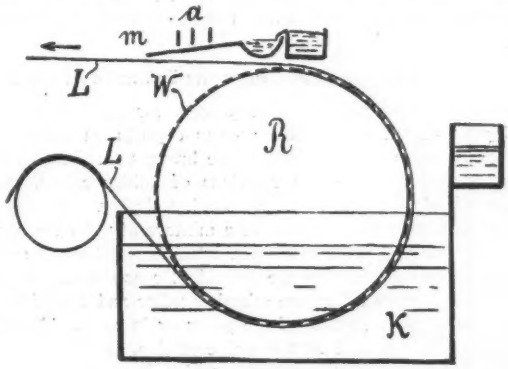

FIG. 3

The disarrangement of the fibers in this paper layer is accomplished with the aid of the various devices which have already been described above. By these means, which are arranged in various ingenious ways, almost every effect which is obtained with the framed screen can be reproduced with the fourdrinier wire. In the case which is represented in the figure, the liquid spray, which is emitted from the trough 17, and the air pressure or water pressure, which streams through the screen from a nozzle tube, arranged on the under side of the screen, are used as means to this end. On this layer of fibers, which has been disarranged by one or the other of these methods and in certain cases also by the aid of stencils, suction or pressure rolls, paper stuff is allowed to flow for the production of the regular paper web. In order to secure papers which are colored on both sides, a second disarranged paper layer which, for example, may have been produced on the framed screen arrangement, is brought upon the upper face of the paper web by couching or by spraying, in the manner which has been described above.

Marbling of Paper by Means of Round Cylinder Screen

A method of obtaining papers which have the marbling effect on one side only is described in Ger. Pat. No. 325,920. The apparatus used for this purpose is shown in Fig. 3. The paper stuff, which is very much diluted with water, is fed to the stuff-box K and is kept at a definite level therein. Between the round cylinder screen R and the wire L, which is led around it, there is placed a piece of oilcloth W. The latter has the design, which it is desired to transpose to the paper, cut out on it, so that the water runs away through the cuts, while the paper fibers are sucked through and

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are taken up by the wire in the form of the design, cut out in the oilcloth. The paper stuff, fed from another source, then runs past the froth separators *a* to form the regular paper layer, which is joined to the paper web, which has been formed on the round cylinder screen by means of the wire L.

Crepe Paper

Crepe paper can also be manufactured by means of the arrangement which is shown in Fig. 3. In this case the piece of oilcloth W is removed. As is well known, a circular screen takes the fibers up in a different direction from the fourdinier wire. The two paper webs, which are joined together at *m*, then possess fibers which lie in directions considerably different from one another whereat the crepe effect is produced.

Velour Paper

In order to manufacture the so-called velour papers by the aid of the apparatus, which is shown in Fig. 3, finely ground clipped hair which has been worked up thoroughly in the hollander—no wood flour or particles of fabric are added—is fed to the stuff-box in which the cylinder R turns. The wire L, which runs around the cylinder R, takes up a layer of this hair, the suction removing the water. The hair web unites with the regular paper web at *m*. In this manner a paper is made which has the appearance of plush or velvet.

IV. Colored Marbling Under the Influence of Heat

In Ger. Pat. No. 283,690 is a process for producing colored marbling effects on paper. This process depends on the observation that the color solutions, which are brought on the surface of the paper, in particular such solutions of aniline colors, can be changed by the influence of heat during drying. It was also observed that under these conditions a mixture of colors, consisting of dyes of different specific weights, when brought on the paper, will tend to be split up into the individual constituents. For this purpose two or more colors are mixed together and the mixture is applied to the entire surface of the paper or in spots. Thereupon the paper, which is still in the wet condition, is dried with the uncolored side on a heated cylinder, which is provided with any desirable embossed design, or on a plate of similar nature. The drying of the parts of the paper which are in direct contact with the embossed design on the roll takes place faster, as may be expected; that is, more heat is applied to the paper from these high spots on the embossed roll than to the other parts of the paper. In this manner the color on the paper is caused to take the design that is embossed on the roll and at the same time it undergoes a decided change, due to the resulting strong contraction of the dye mixture. At the same time that the color on the paper in places corresponding to the embossed design on the roll is being changed by the heat, the rest of the color on the paper forms itself more or less accurately around the design on the paper. The latter action is enhanced particularly by placing the paper, which is colored with the wet dye, unevenly over the embossed roll; thorough moistening of the paper is also advantageous.

When this is done part of the aqueous solution of the color runs into the depressions, whereat there are no places on the paper which are more or less free from color and also in these depressions room is given to the color mixture to separate into its various parts. Moreover, during the process parts of the coloring matter that is on the paper are dried at spots, particularly through the heat which streams from the corner edges of the embossed design on the roll; this again induces new actions to take place. In this manner there is, accordingly, obtained variegated colored designs of a plastic appearance in accordance with the number of colors used in the color mixture. The colors that are used for this purpose are the aniline dyestuffs, which are admirably well suited for coloring designs on paper by this process. These dyes vary somewhat is specific weight, and although this is very small, nevertheless it is sufficient for the purpose, as only a very slight difference in this property of the dyes is requisite to bring about the desired effects.

Coloring Paper at the First Drying Cylinder

In Ger. Pat. No. 289,688 there is described a very advantageous process for coloring paper on the paper-making machine. This is done by subjecting the colored paper web, which is only slightly dehydrated to pressure by means of an endless felt against the first drying cylinder, which is heated as strongly as in the regular process of paper-making. The result is the formation of blisters on the surface of the paper, and these blisters are colored either darker or lighter than the rest of the paper according to the nature of the dyestuffs used, due to their coming in contact with the hot surface of the drying cylinder while the rest of the paper does not. In this manner marbling effects and designs are produced on one side of the paper only, but they are visible from both sides.

Description of the Apparatus

In Fig. 4 there is shown a method of arranging the apparatus for carrying out this process. The paper web *c*, which comes out of the wet press *a b*, is led over guide rolls *d* and *e* to the drying cylinder *f*, to which steam is fed at a comparatively high pressure

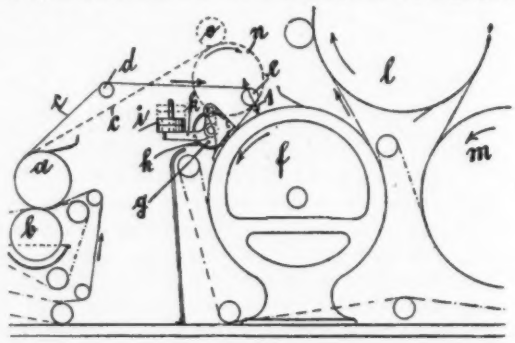

FIG. 4

and whose surface is consequently strongly heated. The paper passes through the free air in reaching this drying cylinder. Then it is pressed up against the heated surface of the cylinder for a short time only. This is accomplished by the aid of a felt which is seen at *h*, which is wound tightly around a roll *g*. Pressure is applied against the paper web by means of this roll, so that the contact between the paper web and the heater surface of the cylinder is a very close one. The amount of pressure that is applied by the felt is regulated by means of weights which are arranged on a lever arm and which cause the roll to press against the felt with varying pressure in accordance with the weight that rests on the lever. Consequently, the felt can be made to exert a greater or less pressure against the paper web in accordance with the marbling effects that it is desired to produce and the thickness of the paper. The longer or shorter the time the paper web runs over the drying cylinder before it comes in contact with the pressure felt, the smaller or larger the blisters that are formed on the paper and, correspondingly, the smaller or larger the size of the marbling designs. In order to be able to change this factor during the operation of the paper-making machine, the paper web guide roll E is made so that it can be shifted in any desirable direction by means of the device *I*. The drying cylinder can be used without any covering, or else, as is indicated in the figure, it can be covered with a felt.

In the place of the cylinders, any of which can be used for the marbling operation, all being of the identical regular size, it is also possible to use a special small cylinder *n*, which is provided with a pressure felt and a pressure roll *o*. These are represented in dotted lines in the figure.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

A. Properties, Chemistry and Testing of Raw Materials and Finished Products.

Contributions to a more Exact Knowledge of the Chemical Composition of Spruce Wood.—Peter Klason. *Paper Trade J.*, lxxiv, No. 18, 45-51 (May 4, 1922).—Translation by Carl L. Fineman and W. E. B. Baker. A detailed historical review of the subject is given. Barium ligninsulphonate was prepared from waste liquor from the manufacture of spruce sulphite. Molecular weight determinations were made. Various groups in the compound were determined. The author concludes that spruce lignin belongs to the aromatic series of compounds, that it contains several nuclei, that it is related to coniferyl alcohol, and that the solubility of the lignin in acid calcium sulphite depends partly on its content of active carbonyl and partly and mainly on the ethylene groups. In the waste liquor the sulphurous acid is partly loosely and partly strongly combined.—I. G.

Lignin Sulphonic Acids.—R. H. McKee and G. Barsky. *Paper Trade J.*, lxxiv, No. 20, 46-48 (May 18, 1922).—As a result of an investigation to determine whether there are one or several substances which occur in the wood which react with bisulphite and sulphurous acid, it is concluded that there are several of these constituents. Details of the experimental work, which was based on a series of fractional precipitations, are given.—I. G.

The Purchase of Steam Coal by Specification.—H. Bell. *Paper Trade J.*, lxxiv, No. 12, 50-51 (March 23, 1922).—A discussion of the various points that have to be watched in the purchase of steam on specification and the significance of the different parts of the specifications.—I. G.

D.—Groundwood Manufacturing and Equipment

Cellulose from Wood.—R. Kron. German Patent 351,987.—The raw material is passed through crushing rolls which crush the wood completely and produce a fibrous fleece or individual wood fibers in a thinly flattened condition. The material can be treated with chemicals in an edge mill or grinding mill. Only very dilute solutions of the chemicals need be used.—I. G.

E.—Acid Processes of Pulp Manufacture and Equipment

Determination of Sulphurous Acid and Lime in Sulphite Liquors.—B. Deutsch. *Wochbl. Papierfabr.*, liii, 314 (Jan. 28, 1922); Translation by C. J. West in *Paper Trade J.*, lxxiv, No. 20, 49-50 (May 18, 1922).—See this journal, lxxiv, No. 21, p. 59, May 25, 1922.—I. G.

F.—Alkaline Processes of Pulp Manufacture and Equipment

Utilization of Caustic Liquors from the Treatment of Straw.—W. Colsman. German Patent 316,147, Aug. 6, 1916.—The black liquor is reboiled, mixed with various vegetable residues and subjected to the action of air in order to obtain a mass that can be spread over the ground. In this manner there is obtained a stable fertilizer which can be used at any time.—I. G.

K.—Paper Manufacturing and Equipment

Notes on the Beating of Paper Pulp.—W. Alison, A Pirie & Sons, Ltd. *Paper Trade J.*, lxxiv, No. 19, 55-57 (May 11, 1922).—Discussion of the theory and practical application of beating.—I. .G

Calculating the Power Consumption of Beaters.—F. M. Bouvier. *Monit. Papeterie Française*, lii, 788-790 (Dec. 15, 1921). Translation by A. Papineau-Couture in *Paper Trade J.*, lxxiv, No. 13, 45-47 (March 30, 1922).—See this journal, lxxiv, No. 24, p. 52, June 15, 1922.—I. G.

Utilization of Latex in Papermaking.—F. Kaye. *Paper*, xxx, No. 7, 29-32 (April 19, 1922); *Paper Trade J.*, lxxiv, No. 17, 47-48 (April 27, 1922); *Paper Mill*, xlv, No. 18, 10, 12 (May 13, 1922).—Considerable interest has been attached to the use of rubber latex in paper making. It is thoroughly incorporated with the fibers in the beater, and various experiments with different kinds of stock have shown that the whiteness of the paper is not impaired. The admixture of latex with the pulp improves the texture and feel of the paper and increases the mechanical strength and folding resistance. It makes the paper water-repellent and increases the electric resistance and dielectric properties. The mechanical strength of papers made from different stocks compared with the same products when mixed with rubber latex is given in tabular form. Latex paper has been found to absorb dyes readily and for a given depth of color less dye is required than in ordinary paper. The cost of making latex paper is shown. (See next abstract.)—I. G.

Manufacture of Latex Paper.—F. Kaye. Can. Patent 216,957, March 21, 1922. (Cf. preceding abstract.)—Rubber-containing latext (preserved with ammonia, formaldehyde, etc., if necessary) is added to the beater furnish after the fibers have been beaten to the extent required for the quality of paper aimed at. After thoroughly mixing the latex with the pulp, a coagulating agent is added, the nature of which depends on the nature and state of the latex, such as acetic, formic, or other suitable organic or mineral acids, or small quantities of mineral salts. The paper may be sized as usual before or after adding the latex. The stock is run on the paper machine in the usual manner. The dried paper can afterwards be vulcanized (if desired) by any suitable process, such as the "Peachey" cold vulcanizing process.—A. P.-C.

Loading Paper With Mineral Salts.—F. Reichard. German Patent 349,882, March 16, 1921.—In loading paper with such heavy materials as gypsum, barium sulphate, etc., only a small part of the substance is retained by the fibers by the methods in use up to the present time, due to the fact that these mineral salts settle quickly because of their weight. To counteract this effect waterglass solution is added to a suspension of the heavy filling materials, which are in as fine a state of subdivision as possible. When the silicic acid of the waterglass is precipitated, it holds these finely divided heavy salts in suspension. It was found that the addition of such materials as acids, salts, magnesium chloride liquor, improves this action considerably.—I. G.

Sulphate of Alumina for Papermaking.—M. Mueller. German Patent 352,289.—The aluminous material is cooked with sulphuric acid, either under pressure or at atmospheric pressure. The acid or solution of bisulphate is used in excess. Coagulation of the mass is prevented by immediate dilution with water and neutralization of the free acid with alkalies. Magnesia is used for this purpose, as the sulphate is equally effective as effective in paper sizing as the sulphate of alumina. Considerable savings in time, material, and heat are effected by this process. The residue from this treatment is available as filler for the paper, and as it is free from acid and sand it does not injure the beating tackle.—I. G.

Hard Sized Paper.—Holzverkohlungs Industrie A. G. German Patent 339,594, March 28, 1916.—The paper pulp is mixed with a small amount of alkaline solutions of the condensation products of hydroxyl naphthenic derivatives with formaldehyde or other aldehydes. A precipitating agent, for example an acid, is added. The resin that is used for sizing the paper may be produced by the solution of alpha-naphthol in a soda liquor, to which

XUM

hot formaldehyde solution is added gradually. The reaction must be controlled. The condensation product of alpha—or beta-naphthol and formaldehyde can also be prepared by melting the naphthols and then adding the formaldehyde slowly. Paraldehyde can be used as well. The mass is heated until it thickens, at which point a further addition of formaldehyde results in the evolution of gas. The resin thus prepared is dissolved in the alkalies. The same resin can be obtained very easily by dissolving alphanaphthol in a little hot acetone to which first about 1% of sulphuric acid has been added and then the formaldehyde. The solution is then evaporated to obtain the resin.—I. G.

The Use of Waterglass in Sizing Paper.—T. E. Blasweiler. *Papierfabr.*, xix, 1217-1223, 1322-1327, 1505-1511, 1542-1546 (Oct. 28, Nov. 18, Dec. 23 and 30, 1921). Compare *Papierfabr.*, xix, 625 ff., 1921.)—Both in sizing pulp with waterglass and in working this material in conjunction with other sizing agents in coating paper, good results were obtained on the paper machine as far as the suction was concerned; there was no sticking at the presses and a smaller consumption of wet felt was noted. Rapid and complete sedimentation took place in the waste waters from the paper machine. The paper was found to possess greater strength and a better feel. This paper can be sized properly with a greater use of filling materials. Paper sized with waterglass will take color well; it will not absorb too much of it and the color will appear bright on the surface of the paper.—I. G.

Regulating the Heating of Dryers.—M. Landraud. German Patent 348,856, Jan. 6, 1921. The valve on the steam pipes leading to the dryers is regulated automatically by the rotation of a roll which guides the paper to correspond with the degree of dryness required.—I. G.

Origin of the So-Called "Mildew" Injury to Paper Makers' Felt.—J. MacInnes, F. C. Huyck & Sons. *Paper Trade J.*, lxxiv, No. 14, 41-42 (April 6, 1922).—By the usual methods of bacteriological investigation the formation of "rust" or "acid" spots on felts was traced to the presence of one kind of bacteria, which is very closely related to *Bacillus mesentaricus*, and which has apparently not been described in the literature. The spores are very resistant to heat and drying. No satisfactory method of sterilizing wool has been developed so far, as any of the procedures which were effective in destroying the spores was injurious to the wool. Molding is prevented if the felts are kept in a dry place at a moderate temperature. Microphotographs of sound and infected fibers are shown.—I. G.

Thin Coated Paper Containing Groundwood.—P. Ebbinghaus. *Wochbl. Papierfabr.*, lii, 4233 (Dec. 24, 1921).—The difficulties encountered in the manufacture of such paper are discussed. They arise mostly in the grinding of the wood pulp, and they can be avoided by the use of a special fine grinding machine. The paper making itself is difficult to carry out.—I. G.

The Manufacture of Ivory and Alabaster Board.—H. Postl. *Wochbl. Papierfabr.*, lii, 3865-3868 (Nov. 26, 1921).—A description of the manufacture of ivory and alabaster paper board, discussing raw materials, treatment in the beater and on the paper machine, and describing special apparatus such as presses, gluing machines, etc. The various adhesives employed in making these products are discussed; their properties are examined and their suitability for the purpose determined.—I. G.

A New Development in Manufacturing Waterproof Paper or Board.—L. Kirschbraun. The Flintkot Co. *Paper Trade J.*, lxxiv, No. 19, 48-50 (May 11, 1922). (See next abstract).—I. G.

Waterproof Paper and Process of Making Same.—L. Kirschbraun. English Patent 174,114, Sept. 7, 1920. The non-adhesive waterproofing emulsion described in U. S. Patent 1,302,810 is made by a continuous process in which molten asphalt, or the like (e. g., pitch, tar, resins, etc.), at about 163 to 177°, is introduced simultaneously with a thin stream of an aqueous suspension of colloidal mineral matter, e. g., clay, into a previously prepared quantity of the emulsion, contained in a mixer and kept in violent agitation by a rapidly revolving agitator fitted with helical blades, the temperature of the mass being maintained at about 66°. The operation may be conducted under pressure when asphalt having a high melting point is used. The finished product, which should contain about 50% asphalt, 40% water and 10% clay, is withdrawn from the bottom of the mixer, diluted with water, passed through a fine strainer and pumped into storage tanks provided with agitators. This emulsion may be added in varying quantities, up to 193° of asphalt on the weight of dry fiber, to beaten pulp and the stock may be run on a Fourdrinier or cylinder machine. The sheets may be heat-dried, in which case the asphalt particles coalesce to form a continuous film throughout the sheet, or air-dried in which case the particles retain their individual character and help to strengthen the sheet.—A. P.-C.

Hard and Other Special Papers.—*Papierfabr.*, xx, 165-169 (Feb. 22, 1922).—The methods of making these papers are described, including data on the amount of different raw materials used, details of the mechanical operation of the process, etc. Amongst the special papers mentioned are Jacquard paper, drawing paper, book printing paper, paper for making stamps, card paper, etc.—I. G.

Glueing Paper by means of Various Adhesives.—Exportingenieure fur Papier und Zellstofftechnik G.m.b.H. German Patent 351,204. A band of paper is rolled up in the solution of the adhesive and allowed to remain for a suitable length of time. The paper from a number of rolls is then glued together to form one sheet. Generally the layers are all of the same sort of paper, but in special cases fabrics or wood veneers may be used. Various materials such as colored powders, bronze powder, sand, wood meal, talc, etc., may be sprinkled on the surface. Tar, asphalt, cellulose solutions, adhesive lacquers, etc., may be used as adhesives.—I. G.

Flexible Waterproof Paper.—L. Heilbronner. German Patent 303,829; English Patent 143,235. "Japan paper" is treated with a hot or cold solution of gelatine, agar-agar, potassium dichromate, glycerine or calcium chloride and ammonium carbonate; then it is dried and coated with a thin film of non-drying oil and train oil. This coating of oil prevents the washing out of the glycerine from the impregnated paper. The ammonium carbonate is added to reduce the inflammability of the paper. Several layers of the paper may be pressed together to form a single sheet for special purposes. This product serves as a substitute for leather or rubber in their application as membranes for gas meters and long distance gas igniting apparatus.—I. G.

Proportioning Chart for Paper Makers.—N. G. Near. *Paper Trade J.*, lxxiv, No. 13, 50 (March 30, 1922).—A proportioning chart is described which is useful for multiplying and dividing formulæ used by paper makers.—T. G.

List of Abbreviated and Full Titles and of Addresses of the Journals from Which Abstracts Have been Prepared for This Issue

Monit. Papeterie Française.Le Moniteur de la Papeterie Française. 154 Boulevard Haussmann, Paris (8°), France.
Paper .....Paper. 251 West Nineteenth St., New York City.
Paper Mill.....The Paper Mill and Wood Pulp News. L. D. Post, Tribune Bldg., 154 Nassau St., New York City.
Paper Trade J.....Paper Trade Journal. 10 East Tthirty-Ninth St., New York City.
Papierfabr .....Der Papier-Fabrikant. Otto Elsner, Oranienstr. 140-142, Berlin, S. 42, Germany.
Pulp and Paper.....Pulp and Paper Magazine of Canada. Cardenvale, Que., Canada.
Wochbl. Papierfabr.....Wochenblatt für Papierfabrikation. Güntter-Staib in Biberach a. d. Riss, Württemberg, Germany.

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

For the Month Ending May 31, 1922, and for the Nine Months Ended May 31, 1922, as Compared with Corresponding Months of Two Previous Years

IMPORTS—PAPER.

Paper and Manufactures of.		May				Eleven Months Ended May 31			
		1921		1922		1921		1922	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Books, Maps, etc., and other printed matter	Free	.....	$461,653	.....	$420,639	.....	$4,781,840	.....	$3,721,217
	Dut.	.....	151,845	.....	186,338	.....	2,206,199	.....	1,981,123
Decalcomania paper, not printed	Free	.....	68,924	.....	5,683	.....	247,926	.....	86,273
Lithographic Labels and Prints (except Post Cards)	lbs..Dut.	$70,663	65,886	189,536	83,341	1,051,806	762,669	1,492,778	697,192
Paper Hangings	Dut.	.....	23,166	.....	31,203	.....	333,455	.....	390,900
Photographic	lbs..Dut.	108,881	21,954	134,949	70,051	1,340,242	345,354	2,245,627	541,695
Printing Paper—									
News print	lbs..Free	88,476,736	4,866,318	162,703,171	5,649,320	1,382,670,830	76,913,439	1,687,526,475	65,493,042
All other	lbs..Dut.	91,229	21,532	346,103	22,344	4,180,412	546,147	693,160	71,856
Post Cards, Souvenir	Dut.	.....	9,582	.....	3,865	.....	179,188	.....	95,216
Pulp board, in rolls	lbs..Dut.	4,380,355	129,240	6,671,898	154,195	69,179,247	2,230,085	44,313,622	1,151,000
Surface-coated	lbs..Dut.	39,511	13,875	92,203	21,720	1,100,584	304,963	663,854	155,129
Wrapping	lbs..Dut.	1,111,999	40,334	6,066,041	225,585	6,017,489	469,672	24,834,594	935,126
All other	Dut.	.....	232,644	.....	284,118	.....	3,267,808	.....	2,456,905
Total Paper, and Manufactures of		.....	$6,106,953	.....	$7,158,402	.....	$92,588,745	.....	$77,776,674
CRUDE PAPER STOCK.									
Rags (except woolen)	lbs..Free	6,077,217	$102,203	14,484,596	$195,208	152,895,309	$5,494,796	185,869,064	$2,708,460
All other kinds of paper stock	lbs..Free	6,967,863	162,183	11,108,841	284,912	145,984,023	5,020,071	124,573,719	2,761,991
WOOD PULP.									
Mechanically ground	tons..Free	6,314	$215,558	10,380	$278,868	159,846	$11,924,911	192,848	$5,083,491
Chemical—									
Unbleached—									
Sulphate	tons..Free	6,374	$590,418	13,947	$855,531	117,700	$14,471,792	199,148	$12,010,252
Sulphite	tons..Free	5,457	422,093	18,155	979,747	213,987	29,661,878	287,797	16,134,058
Total	tons..Free	11,831	$1,012,511	32,102	$1,835,278	331,687	$44,133,670	486,945	$28,144,310
Imported from—									
Norway	tons	.....	.....	3,065	$162,197	6,273	$996,761	15,984	$819,881
Sweden	tons	320	$17,590	3,504	182,469	81,023	11,499,883	184,682	10,077,439
Canada	tons	10,631	934,157	23,370	1,357,290	217,814	27,646,182	225,090	14,046,200
Other countries	tons	880	60,764	2,163	133,322	26,577	3,990,844	61,189	3,200,700
Bleached—									
Sulphate	tons..Free	.....	.....	.....	.....	8,357	$1,178,657	5,435	$348,613
Sulphite	tons..Free	3,795	$434,952	14,021	$1,198,360	84,643	15,484,894	132,233	11,456,776
Total	tons..Free	3,795	$434,952	14,021	$1,198,360	93,000	$16,663,551	137,668	$11,805,389
Imported from—									
Norway	tons	.....	.....	3,963	$331,389	9,990	$2,255,910	22,640	$2,066,267
Sweden	tons	.....	.....	1,107	82,705	12,483	2,116,087	17,903	1,279,876
Canada	tons	3,795	$434,952	8,800	774,188	62,505	10,827,254	80,835	7,300,382
Other countries	tons	.....	.....	151	10,078	8,022	1,464,300	16,290	1,158,864
CHEMICALS AND OTHER PAPER MAKERS' MATERIALS.									
Colors or dyes, n.e.s.	lbs..Dut.	306,558	$307,735	237,452	$364,135	3,202,443	$4,668,406	3,090,736	$4,472,734
Imported from—									
Germany	lbs.	31,742	$32,187	80,552	$144,293	1,142,459	$1,620,459	1,300,679	$1,990,650
Switzerland	lbs.	264,376	257,188	139,331	202,190	1,223,443	2,054,288	1,302,945	1,965,173
United Kingdom	lbs.	8,599	15,090	5,588	4,394	273,318	357,545	284,206	275,933
Other countries	lbs.	1,841	3,270	11,981	13,258	563,223	636,114	202,906	240,978
Indigo—									
Natural	lbs..Dut.	220	$248	2,523	$1,962	133,448	$299,431	23,142	$28,588
Synthetic	lbs..Dut.	.....	.....	200	553	266,804	103,065	434,316	267,551
Alizarin and alizarin dyes	lbs..Dut.	9,516	14,505	43,180	53,930	323,630	380,147	386,280	596,527
Lactarene or Casein	lbs..Free	2,016,616	171,735	701,114	56,948	13,563,966	1,521,879	9,696,978	631,177
Lime, Chlor. of	lbs..Dut.	1,039,023	26,964	383,624	6,727	4,225,044	135,304	17,340,995	263,949
Magnesite, not purified	tons..Free	5,388	45,125	14,557	219,050	43,353	705,167	69,050	1,203,598
Potash, Hydrate of	lbs..Free	648,886	43,880	2,303,679	118,476	2,679,701	365,434	13,762,776	609,780
Sulphur or Brimstone	tons..Free	1	74	.....	.....	1	104	2	141
China clay or kaolin	tons..Dut.	8,459	105,705	19,610	210,170	242,600	2,752,523	175,811	1,840,995
PULPWOOD.									
Rough	cords..Free	11,445	$146,528	17,068	$154,979	316,816	$4,001,094	152,413	$1,747,862
Peeled	cords..Free	43,777	648,666	56,611	584,807	1,043,936	15,515,608	527,629	5,767,706
Rossed	cords..Free	2,549	52,976	7,708	96,912	154,935	2,908,242	63,697	940,454
Total	cords	57,771	$848,170	81,387	$836,698	1,515,687	$22,424,944	743,739	$8,456,022

(*Continued on page* 58)

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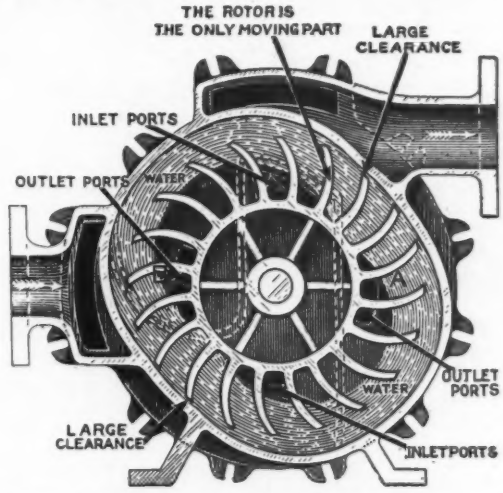

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PAPER AND PAPER STOCK IMPORTS AND EXPORTS OF THE UNITED STATES

(*Continued from page 56*)

EXPORTS—PAPER.

Paper and Manufactures of.	May 1921 Quantity	May 1921 Value	May 1922 Quantity	May 1922 Value	Eleven Months Ended May 31 1921 Quantity	Eleven Months Ended May 31 1921 Value	Eleven Months Ended May 31 1922 Quantity	Eleven Months Ended May 31 1922 Value
Paper, except printed matter (total)	.....	$1,856,160	.....	$2,167,536	.....	$55,036,057	.....	$18,544,663
Printing Paper—								
News Print ..... lbs.	3,708,701	$234,056	5,151,439	$225,456	62,954,234	$4,541,189	38,126,855	$1,783,590
Exported to—								
Canada	79,972	$7,554	332,057	$19,487	1,279,243	$106,204	1,108,689	$75,855
Cuba	2,904,453	178,902	1,672,336	66,977	18,395,261	1,295,425	14,863,002	662,496
Argentina	.....	.....	1,265,840	50,589	23,210,439	1,373,513	9,243,742	363,826
Brazil	44,768	2,560	20,730	1,146	1,126,609	126,675	205,920	16,647
Uruguay	.....	.....	12,980	548	1,721,061	108,960	435,876	19,573
Other South America	63,624	4,885	397,397	17,508	4,369,116	402,644	2,359,189	120,643
China	29,362	1,770	.....	.....	1,711,545	173,224	1,261,256	51,605
Philippine Islands	288,575	18,005	296,882	13,431	3,630,265	254,421	3,041,464	152,294
Australia	.....	.....	.....	.....	891,602	91,449	.....	.....
Other countries	297,947	20,380	1,153,217	55,770	6,619,093	608,674	5,607,717	320,651
Bible or India paper ..... lbs.	.....	.....	2,186	$288	.....	.....	†10,691	†$2,163
Other book paper, not coated ..... lbs.	2,078,064	$279,850	2,631,050	$244,742	76,468,845	$12,382,229	19,170,432	$2,066,538
Exported to—								
Greece	.....	.....	.....	.....	756,384	$98,100	.....	.....
United Kingdom	22,578	$3,125	70,281	$15,881	1,096,310	243,928	377,932	$76,509
Canada	350,113	48,596	203,460	19,907	4,641,691	645,479	2,464,743	284,720
Mexico	297,914	46,438	244,103	22,465	2,280,322	419,404	2,631,248	294,917
Cuba	351,629	56,507	576,481	52,346	11,241,173	1,968,430	2,934,449	293,241
Argentina	105,080	14,662	72,869	7,088	12,266,565	1,719,552	371,720	46,815
Brazil	64,094	8,019	221,496	20,882	4,915,295	904,189	733,742	96,301
Chile	13,775	2,274	14,326	1,614	988,516	181,606	95,784	11,957
Colombia	1,588	313	127,366	12,293	1,348,219	233,170	480,988	46,961
Peru	14,367	2,741	.....	.....	1,171,709	205,396	306,608	30,237
Uruguay	35,707	4,557	18,821	1,871	2,003,039	279,051	21,653	2,133
Venezuela	22,446	2,125	22,572	2,601	1,255,702	227,977	587,756	71,115
British India	275	34	39,569	3,715	2,939,347	469,048	462,429	45,854
China	60,068	5,012	181,354	15,616	6,340,039	1,062,760	1,562,606	154,525
Dutch East Indies	6,192	879	.....	.....	1,213,564	197,485	9,186	1,139
Japan	286,925	32,039	284,410	17,726	1,806,682	238,911	2,502,779	208,498
Philippine Islands	122,067	15,388	280,688	22,422	4,676,318	778,652	1,393,817	151,291
Australia	203,411	18,003	108,763	10,258	8,144,640	1,146,213	657,697	64,362
Other countries	119,835	19,138	164,491	18,057	7,383,330	1,362,878	1,575,295	185,963
Cover paper ..... lbs.	.....	.....	106,914	$16,676	.....	.....	†509,380	†$77,949
Grease-proof and waterproof paper ..... lbs.	.....	$7,944	140,387	15,453	.....	$339,547	.....	89,310
Wrapping paper ..... lbs.	1,844,729	137,617	.....	.....	40,649,354	5,035,348	*11,682,845	*777,175
Kraft wrapping ..... lbs.	.....	.....	71,491	5,615	.....	.....	†387,471	†30,993
Other wrapping ..... lbs.	.....	.....	2,918,922	183,315	.....	.....	†14,808,248	†894,104
Writing paper and envelopes	.....	243,618	.....	.....	.....	8,055,226	.....	*1,033,894
Writing paper, except in papeteries ..... lbs.	.....	.....	589,397	92,795	.....	.....	†2,917,794	†491,036
Surface-coated paper ..... lbs.	.....	.....	318,415	50,004	.....	.....	†1,319,224	†245,587
Tissue and toilet paper	.....	85,682	.....	.....	.....	1,651,439	.....	*1,398,118
Tissue and crêpe paper ..... lbs.	.....	.....	210,748	50,884	.....	.....	†945,623	†230,359
Toilet paper ..... lbs.	.....	.....	748,400	66,456	.....	.....	†2,160,494	†216,920
Paper towels and napkins ..... lbs.	.....	11,849	65,636	9,582	.....	348,735	.....	130,964
Bristols and bristol board ..... lbs.	.....	.....	147,370	22,509	.....	.....	†654,918	†86,819
Paper board and straw board ..... lbs.	.....	139,328	4,324,561	208,879	.....	4,723,154	.....	1,478,270
Sheathing and building paper ..... lbs.	.....	.....	651,708	27,017	.....	.....	†2,181,727	†86,651
Wall board of paper or pulp ..... sq. ft.	.....	46,707	522,531	24,207	.....	1,310,599	.....	343,279
Cigarette paper and books ..... lbs.	.....	.....	32,725	13,550	.....	.....	†278,711	†113,430
Photographic paper ..... lbs.	.....	.....	138,170	141,993	.....	.....	†664,119	†638,559
Paper hangings (wall paper) ..... yard	.....	37,003	1,314,131	30,234	.....	1,039,093	.....	383,535
Paper bags ..... lbs.	.....	42,258	818,862	80,283	.....	1,891,681	.....	798,851
Boxes and cartons ..... lbs.	.....	79,076	884,372	64,076	.....	1,877,646	.....	885,090
Carbon paper ..... lbs.	.....	38,884	66,366	48,897	.....	786,231	.....	434,010
Envelopes ..... lbs.	.....	.....	250,871	49,314	.....	.....	†1,081,965	†203,650
Indurated fiber ware ..... lbs.	.....	.....	39,186	3,855	.....	.....	†116,685	†12,307
Playing cards ..... pack	.....	34,009	353,948	48,124	.....	1,000,675	.....	380,513
Cash-register and adding-machine paper ..... lbs.	.....	4,792	48,266	5,723	.....	239,159	.....	95,840
Papeteries (writing paper in boxes) ..... lbs.	.....	.....	23,375	8,155	.....	.....	†84,951	†32,311
Other paper and paper products, n.e.s. ..... lbs.	.....	433,487	2,975,904	429,454	.....	9,814,106	.....	4,102,848
Books, maps, pictures, and other printed matter ..... lbs.	.....	$1,590,219	.....	.....	.....	$23,095,521	.....	*$9,481,915
Books and Pamphlets ..... lbs.	.....	.....	1,886,338	$665,648	.....	.....	†8,162,974	†2,979,393
Maps and charts ..... lbs.	.....	.....	10,333	15,216	.....	.....	†50,229	†76,997
Music in books or sheets ..... lbs.	.....	.....	44,079	24,620	.....	.....	†192,900	†132,341
Souvenir post cards ..... lbs.	.....	.....	71,974	12,099	.....	.....	†783,898	†101,602
Lithographically printed matter, except post cards and maps ..... lbs.	.....	.....	113,107	59,302	.....	.....	†659,810	†334,055
Other printed matter ..... lbs.	.....	.....	1,926,189	694,404	.....	.....	†8,045,811	†2,880,402

WOOD PULP AND PAPER STOCK.

Wood Pulp ..... tons	2,341	$162,414	.....	.....	25,255	$2,618,688	*11,740	*$614,098
Mechanical wood pulp ..... tons	.....	.....	.....	.....	.....	.....	†49	†3,859
Sulphite wood pulp ..... tons	.....	.....	1,542	$67,130	.....	.....	†8,340	†362,699
Soda wood pulp ..... tons	.....	.....	466	41,907	.....	.....	†1,694	†153,533
Kraft wood pulp ..... tons	.....	.....	.....	.....	.....	.....	.....	.....
Other wood pulp ..... tons	.....	.....	130	9,923	.....	.....	†1,203	†60,407
Rags, and other paper stock ..... lbs.	1,897,169	38,291	6,609,897	128,126	54,514,835	1,702,754	63,965,051	998,688

PAPER AND PULP MILL MACHINERY.

Paper and pulp-mill machinery	.....	$157,933	.....	.....	.....	$3,453,677	.....	*$1,376,074
Pulp-mill machinery ..... lbs.	.....	.....	9,344	$1,788	.....	.....	†90,377	†22,284
Paper-mill machinery ..... lbs.	.....	.....	360,480	$118,913	.....	.....	†2,939,226	†958,912

*July 1 to Dec. 31, 1921. †Jan. 1 to May 31, 1922.

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Chicago Office
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Howard Ledger

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Pure White Waxed Paper
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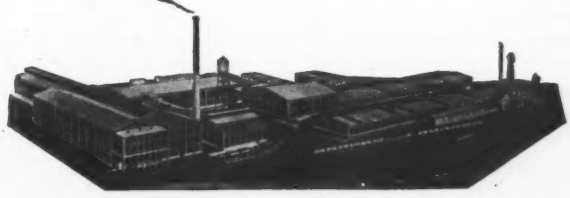

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XUM

Trade Mark Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to paper and pulp field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Mark Company, Barrister building, Washington, D. C., or Bush building, 130 West Forty-second street, New York, trade-mark specialists.

As an additional service feature to its readers, the PAPER TRADE JOURNAL gladly offers to them an advance search free of charge, on any mark they may contemplate printing or registering.

TIP TOP—No. 163,470. A. W. Pohlman Paper Company, Inc., New York. For bond paper for writing and printing purposes.

FOREFATHERS—No. 163,469. A. W. Pohlman Paper Company, Inc., New York. For bond paper for writing and printing purposes.

ALLEGIANCE—No. 163,265. Fox River Paper Company, Appleton, Wis. For writing paper.

APPROVAL—No. 163,264. Fox River Paper Company, Appleton, Wis. For writing paper.

SINCERITY—No. 163,263. Fox River Paper Company, Appleton, Wis. For writing paper.

ANNUAL REPORT OF PAPER DIVISION

(*Continued from page 36*)

ufacturers in the field of exporting was outlined by the division and presented to certain manufacturers and exporters for suggestions. At the end of the fiscal year it was still undecided as to whether this canvass would be made. From the point of view of knowing how best to serve the industry it would seem a desirable project, but the interest of the paper industry in general in exporting has not yet been sufficiently established to determine whether it would be worth while to canvass each manufacturer on this subject.

A general questionnaire on the markets for paper and paper products in all foreign countries was prepared. At the end of the fiscal year it was awaiting only further suggestions from the trade in order to be placed in final form for sending to consuls and bureau representatives in all parts of the world.

A large part of the division's time is consumed in replying to inquiries of all sorts relative to foreign trade and to the paper industry in foreign countries.

The division is always ready to render miscellaneous services of any sort regarding foreign trade to paper manufacturers and exporters. An instance of this sort is the negotiations of the division to receive 500 gallons of rubber latex (the milk of the rubber tree) from the East Indian plantations, through the good offices of Commercial Attaché Walter S. Tower, at London, in order that paper manufacturers may experiment with a newly invented process for the use of rubber latex in making paper. By cable communication with Mr. Tower, the division made arrangements for the sending of this shipment and by correspondence with the interested concerns in the United States it arranged to divide the shipment according to the demands. American paper manufacturers desired immediate shipment of an amount considerably in excess of the gallon lot at that time available in London for sending to the United States. It is to be hoped that the experiments will demonstrate the possibility for the commercial use of rubber latex in large quantities in making paper. Laboratory experiments already have established the fact that certain characteristics of paper are improved by the introduction of latex.

J. F. Phillippi Co. To Deal in Pulpwood

BANGOR, Me., July 18, 1922.—The J. F. Phillippi Company has been organized in Bangor to carry on a general lumbering business and will probably deal in pulpwood and timberlands, the president, J. Frederick Phillippi of Bangor, having formerly held a prominent position in the spruce wood department of the Great Northern Paper Company, and later with the E. B. Draper Company, large Bangor pulpwood operator. The E. B. Draper Company, which attained to large proportions during the war and later, curtailed operations considerably last year, releasing scores of office and woods employees. The capital stock of the new corporation is authorized at $100,000, with par value of $100. Directors are Irving Stetson, vice-president of the First National Bank, Eugene T. Savage of the T. R. Savage Company, Gorham H. Wood, president of the Eastern Trust and Banking Company, and John H. Hickey of Old Town. The new corporation is said to have excellent financial backing

No Low Water at Holyoke

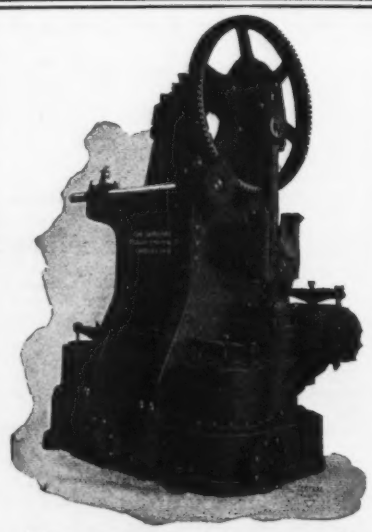
[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., July 24, 1922.—Paper manufacturing plants in this city are not troubled this summer by low water. Saturday there were three feet of water in the Holyoke dam. The river has given the mills about six weeks more full water than a year ago, this also making a considerable saving in coal. Usually at this time of the year the water in the Connecticut River is low but not so this year, at any rate up to the present time.

To Show Canadian Paper in New York

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., July 17, 1922.—The Canadian Department of the Interior is planning a forestry exhibit at the Eighth National Exhibition of Chemical Industries to be held in the Grand Central Palace, New York, during the week of September 11-16. The exhibition will include products from pulp and paper and wood distillation plants, and will demonstrate the possibilities of Canada's undeveloped water power and forests for American capital.



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In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

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Manufacturers
PAPER MAKERS' and FILTER
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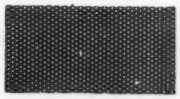
Perforated Metal Screens
For Pulp and Paper Mills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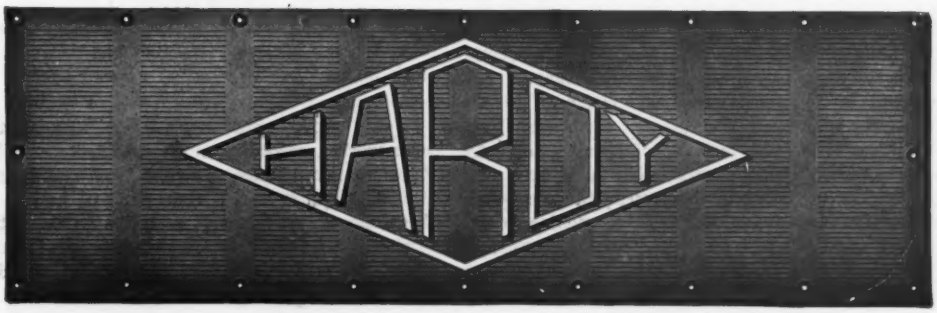

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, July 26, 1922.

In spite of both the coal and rail strikes and other difficulties accompanying the summer months, it appears that these factors combined have not to any great extent harrassed the New York paper market. For summer business, the present volume in all phases of the industry may truly be regarded as remarkable. Only in a few instances have mills been forced to slacken up their production, and in many instances they have had all they could do to meet the urgent demands of consumers. On the face of things the rail situation will solve itself before a dangerous crisis has been reached. Manufacturers, however, are not inclined to place too much faith in the assumption that an amicable transportation settlement will be effected shortly, and, on the whole, are taking the precaution of laying in adequate supplies of merchandise to tide them over the coming two to three months.

As far as coal is concerned, it is estimated that while approximately half of the nation's reserve supply of the commodity has been consumed since July 1, there is still enough left, about 31,000,000 tons, to last nearly two months more, figuring the nation's coal consumption at the maximum of 4,000,000 tons a week. In order to avert a coal panic, however, some tangible arrangements will have to be negotiated before August 15, about which time the shortage will be so widespread as to be generally felt. Smaller bogus and tissue mills are having their difficulties already, and even the larger paper manufacturers the country over are not inclined to view the situation too lightly.

News print continues to cut a mark of its own in the industry, and it would seem that the phenomenal demand and equally phenomenal production in this market have no intention of even "coming up for air"—at least for the balance of the present year. The increase in prices several weeks ago, rather than retarding the sale of the commodity, has apparently stimulated buyers into contracting for future shipment before any more advances are registered. Mills are running to capacity and there seems to be no let-down in publishers' demands. Newspapers are running quantities of advertising, many special editions and exceptionally large papers as a general rule. This combined with the fact that numbers of the small-town papers have recently got back in the running may account largely for the growing demand.

Dealers in book paper are now basing their hopes on the large volume of fall business they feel certain will come. There have been no price alterations to speak of throughout the late spring and summer and it is because of the fact that consumers' stocks have run to an exceedingly low ebb during this period that good times are anticipated when the stocking up does come. Hand-to-mouth buying has characterized the business of recent weeks and the demand has been sluggish.

While Latin-America has almost fallen out of the limelight as an export objective for fine paper manufacturers, the domestic market, on the other hand, has firmed slightly. Volume of transactions is light, but a fairly steady amount of fine paper finds its way into consuming channels each week to meet the current demands. Dealers and merchants have not exhibited any tendency to stock up heavily for fall business as yet, but this is confidently expected as soon as the slight depression of summer is over.

As far as demand is concerned, tissue manufacturers do not even know that summer is at hand. For the past three weeks they have enjoyed a volume of business that is really remarkable. As compared with some of the spring months, when each week was about as dull as the one preceding it, the present situation—with mills in some cases turning down orders—is a genuine boom. Prices are firm and while but few advances have beeen made, a general stiffening on all grades of tissue is predicted for the near future.

Kraft mills also are turning out a goodly amount of wrapping paper in response to a steady, regular demand. Business rather resembles that of fall or early winter than that of summer in point of volume. Bogus prices are considerably higher and this may be directly traced to the materially increased cost of coal to these mills.

For two weeks the board market has undergone the most satisfying period of strengthening and improvement it has known in many months. Some of the mills are sold up for the next six weeks and more and patent coated board moved up to $70, New York. The increased prices of paper stock have played their part in the price stiffening in this market, and the board situation at present is considered to be in a strong position even though orders are not being received in great volume.

Mechanical Pulp

Groundwood mills are still doing a fair amount of business and when it is considered that at this time of the year most of the grinders are really forced to slacken up due to low water, it is gratifying to learn that production of any sort is being carried on. The immense volume of news print production has contributed to the stability of the market for mechanical pulp, and due to the fact that available supplies are fast diminishing, dealers look for a rise in prices to come soon.

Chemical Pulp

Kraft pulp prices are, on the whole, remaining firm, although there have been some slight price lowerings on imported grades. Chemical pulp generally is decidedly firm in tone and although not much buying is being done for future delivery, the current demand supports a fairly active market. Dealers believe that prices will advance with the waning of summer.

Old Rope and Bagging

Rope has been moving into consuming channels in regular amounts, a fair amount of activity on all grades being noted as well as an unusually strong demand for mixed strings and manila rope. Collections of old rope have been very ragged for many months and packers are experiencing difficulty in securing adequate shipping facilities. Prices continue to stiffen all along the line and the market is firm.

Waste Paper

Lower grades of waste paper are now in excellent demand and consumption by paper mills of the better grades continues to be heavy where these grades can be obtained. Prices are about as high as they may safely go with soda pulp at its present price. Paper box board mills are regulating their prices in proportion to the continually advancing cost of paper stock, many of the lower grades of waste paper being utilized in this industry.

Rags

Roofing is sky-high and practically unavailable in quantity shipment. There is a steady demand for both new and old grades of whites and bleachable rags as well as thirds and blues, but it is nearly impossible to find anyone with quantities of these grades to sell, according to several dealers in this city. The general tone of the rag market is one of prosperity. Prices have an upward trend and it is believed that the next sixty days will bring them much higher.

Twine

A very gradual improvement is constantly taking place in the twine market, according to several leading merchants of this city. Prices are not expected to go any lower and dealers state that when consumers realize this, a resumption of normal buying will come about and the market will soon get on its feet. At present the demand is quite slack, but as raw materials become more and more scarce, the time rapidly approaches when a decided advance may be anticipated.

XUM

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations July 25, 1922:

STOCKS	BID.	ASKED.
American Writing Paper Company, pref.	29	30
International Paper Company, com.	52⅞	53½
International Paper Company, pref., stamped	70	53½
Union Bag & Paper Corporation	59½	60

Paper

F. o. b. Mill.

Ledgers	10.50	@	30.00
Bonds	8.50	@	55.00
Writings—			
Extra Superfine	14	@	25
Superfine	13	@	20
Tub Sized	10	@	16
Engine Sized	9.00	@	15.00
News—f. o. b. Mill—			
Rolls, contract	3.50	@	3.75
Rolls, transit	3.75	@	4.00
Sheets	4.00	@	
Side Runs	3.25	@	3.50
Book, Cased—f. o. b. Mill			
S. & S. C	7.50	@	9.00
M. F	6.00	@	7.50
Coated and Enamel	8.75	@	15.00
Lithograph	9.00	@	11.00
Tissues—f. o. b. Mill			
White, No. 1	.75	@	.80
Colored	1.00	@	2.00
Anti-Tarnish	.75	@	.80
Silver Tissue	1.50	@	2.70
Manila	.75	@	.80
Kraft—f. o. b. Mill—			
No. 1 Domestic	7.00	@	7.50
No. 2 Domestic	5.75	@	6.25
Imported	6.00	@	6.25
Screenings	2.50	@	3.50
Manila—			
No. 1 Jute	8.50	@	9.00
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.50	@	5.50
No. 2 Wood	4.00	@	4.50
Butchers	4.25	@	4.75
Fiber Papers—			
No. 1 Fiber	6.00	@	6.25
No. 2 Fiber	5.00	@	5.25
Common Bogus	1.75	@	2.25
Card Middies	4.00	@	5.00
Boards—per ton—			
News	40.00	@	45.00
Straw	40.00	@	45.00
Chip	37.50	@	42.50
Binders' Board	60.00	@	70.00
Sgl. Mla. LL.Chip.	52.50	@	62.50
Wood Pulp	75.00	@	90.00
Container	60.00	@	70.00
Wax Paper—			
Self Sealing White 28 and 30 lb. basis	10.00	@	11.00
Waxed Tissue	1.40	@	1.60
Glassine—			
Bleached, basis 25 lbs.	12.75	@	13.25
Bleached, basis 20 lbs.	13.75	@	15.25

Mechanical Pulp

(Ex-Dock.)

No. 1 Imported	32.00	@	38.00
(F. o. b. Pulp Mills.)			
No. 1 Domestic	28.00	@	34.00

Chemical Pulp

(Ex-Dock, Atlantic Ports.)

Sulphite (Imported)—			
Bleached	4.30	@	4.50
Easy Bleaching	2.85	@	3.10
No. 1 strong unbleached	2.50	@	2.75
No. 2 Strong unbleached	2.25	@	2.50
No. 1 Kraft	2.50	@	3.00
Sulphate—			
Bleached	3.90	@	4.00
(F. o. b. Pulp Mill.)			
Sulphite (Domestic)—			
Bleached	4.00	@	4.50
Strong unbl'chd.	2.60	@	2.80
Easy Bleaching Sulphite	2.60	@	3.10
News Sulphite	2.50	@	2.80
Mitscherlich	2.80	@	3.10
Kraft (Domestic)	2.50	@	3.00
Soda Bleached	3.50	@	3.75

Domestic Rags

New

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—			
New White, No. 1	10.30	@	11.00
New White, No. 2	6.50	@	7.00
Silesias, No. 1	6.00	@	6.50
New Unbleached	8.50	@	9.00
Washables	4.00	@	4.25
Fancy	5.00	@	5.50
Cotton—according to Grades—			
Blue Overall	5.50	@	6.00
New Blue	4.25	@	4.75
New Black Soft	3.00	@	3.25
New Light Seconds	2.75	@	3.00
O. D. Khaki Cuttings	3.25	@	3.60
Men's Corduroy	2.50	@	2.75
New Canvas	6.50	@	7.00
New Black Mixed Old	2.25	@	2.75
White, No. 1—			
Repacked	5.60	@	6.10
Miscellaneous	4.50	@	5.00
White, No. 2—			
Repacked	2.75	@	3.00
Miscellaneous	2.10	@	2.35
St. Soiled White	1.15	@	1.25
Thirds and Blues—			
Repacked	1.60	@	1.75
Miscellaneous	1.15	@	1.25
Black stockings	2.25	@	2.50
Roofing Rags—			
Cloth Strippings	1.15	@	1.20
No. 1	1.15	@	1.20
No. 2	1.10	@	1.15
No. 3	.75	@	.80
No. 4	.75	@	.80
No. 5A	.90		nominal

Foreign Rags

New Light Silesias	6.00		nominal
Light Flannelettes	6.75		nominal
Unbl'chd Cottons	7.50		nominal
New White Cuttings	9.50		nominal
New Light Oxfords	6.00		nominal
New Light Prints	4.50		nominal
New Mixed Cuttings	2.00	@	2.50
New Dark Cuttings	1.90	@	2.10
No. 1 White Linens	9.00	@	11.00
No. 2 White Linens	6.50		nominal
No. 3 White Linens	5.00		nominal
No. 4 White Linens	3.50		nominal
Old Extra Light Prints	2.00		nominal
Ord. Light Prints	1.75		nominal
Med. Light Prints	1.50		nominal
Dutch Blue Cottons	1.85		nominal
German Blue Cottons	1.50		nominal
Ger. Blue Linens	3.50		nominal
Checks and Blues	1.50		nominal
Dark Cottons	1.10	@	1.15
Shoppery	1.00	@	1.05
French Blues	2.00		nominal

Bagging

Prices to Mill f. o. b. N. Y.

Gunny No. 1—			
Foreign	.80	@	.85
Domestic	.80	@	.85
Wool, Tares, light	1.00	@	1.10
Wool, Tares, heavy	1.10	@	1.15
Bright Bagging	.90	@	1.00
No. 1 Scrap	.80	@	.90
Sound Bagging	.75	@	.85
Manila Rope—			
Foreign	5.00	@	5.25
Domestic	5.25	@	5.50
New Bu. Cut	1.80	@	1.90
Hessian Jute Threads—			
Foreign	2.00	@	2.50
Domestic	2.00	@	2.25
Mixed Strings	.75	@	.85

Twines

Cotton—(F. o. b. Mill)			
No. 1	.33	@	.35
No. 2	.31	@	.33
No. 3	.27	@	.29
India, No. 6 basis—			
Light	.18	@	.19
Dark	.18	@	.19
B. C., 18 Basis	.39	@	.41
A. B. Italian, 18 Basis	.51	@	.61
Finished Jute—			
Light, 18 basis	.26	@	.27
Dark, 18 basis	.27	@	.29
Jute Wrapping, 3-6 Ply—			
No. 1	.23	@	.24
No. 2	.31	@	.32
Tube Rope—			
4-ply and larger	.15	@	.17
Fine Tube Yarn—			
5-ply and larger	.19	@	.21
4-ply	.20	@	.22
3-ply	.20	@	.22
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.18
Jute Rope	.13	@	.15
Amer. Hemp, 6	.33	@	.35
Sisal Hay Rope—			
No. 1 Basis	.15	@	.17
No. 2 Basis	.13	@	.15
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

Old Waste Papers

(F. o. b. New York)

Shavings—			
Hard, White, No. 1	3.90	@	4.15
Hard, White, No. 2	3.50	@	3.70
Soft, White, No. 1	3.50	@	3.65
Flat Stock—			
Stitchless	1.85	@	1.95
Over Issue Mag.	1.85	@	1.95
Solid Flat Book	1.75	@	1.85
Crumpled No. 1	1.25	@	1.35
Solid Book Ledger	2.25	@	2.50
Ledger Stock	1.90	@	2.00
No. 1 White News	1.70	@	1.80
New B. B. Chips	.65	@	.70
Manilas—			
New Env. Cut	2.40	@	2.60
New Cut No. 1	1.75	@	1.90
Extra No. 1, Old	1.40	@	1.60
Print	.90	@	1.00
Container Board	.65	@	.75
Bogus Wrapper	.60	@	.70
Old Krafts, machine compressed Bales	1.80	@	1.90
News—			
Strictly Overissue	.75	@	.80
Strictly Folded	.67½	@	.72½
No. 1 Mixed Paper	.57½	@	.62½
Common Paper	.35	@	.40

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill

All Rag Bond	35	@	40
No. 1 Rag Bond	30	@	35
No. 2 Rag Bond	18	@	20
Water Marked Sulphite	10	@	14
Sulphite Bond	9	@	12
Sulphite Ledger	12	@	13
Superfine Writing	18	@	24
No. 1 Fine Writing	14	@	22
No. 2 Fine Writing	12	@	20
No. 3 Fine Writing	8	@	12
No. 1 M. F. Book	6¼	@	7
No. 1 S. & S. C. Book	6¾	@	7½
Coated Book	8¾	@	10¾
Coated Label	8½	@	10½
News—Rolls, mill	3½	@	4½
News—Sheets, mill	3¾	@	4¾
No. 1 Manila	5	@	5½
No. 1 Fiber	4½	@	5
No. 2 Manila	4	@	4½
Butchers' Manila	4	@	—
No. 1 Kraft	6¾	@	7
No. 2 Kraft	5¾	@	6
Wood Tag Boards	4	@	—
Screenings	2½	@	—
Boards, per ton—			
Plain Chip	35.00	@	40.00
Solid News	40.00	@	45.00
Manila Lined Chip	45.00	@	52.50
Container Line—			
85 Test	55.00	@	60.00
100 Test	60.00	@	65.00
Binders' Board	75.00	@	—
Solid Wood Pulp	80.00	@	90.00
Straw Board	35.00	@	40.00
Filled Pulp Board	55.00	@	60.00

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
No. 1 Soft Shav.	3.35	@	3.50
No. 1 Mixed	1.40	@	1.50
No. 2 Mixed	1.25	@	1.35
White Envel. Cuttings	3.75	@	4.00
Ledgers and Writings	2.00	@	2.25
Solid Books	1.85	@	2.10
No. 1 Books, light	1.50	@	1.60
Blanks	1.75	@	2.00
Ex. No. 1 Manila	1.90	@	2.00
Manila Envelope Cuttings	2.00	@	2.10
No. 1 Manilas	1.10	@	1.20
Folders News (over issue)	1.00	@	1.10
Old Newspaper	.95	@	1.00
Mixed Papers	.90	@	1.00
Straw Clippings	.90	@	1.00
Binders Clippings	.90	@	1.00
Kraft	1.75	@	2.00
New Kraft Cuts	2.00	@	2.10
Roofing Stock, f.o.b. Chicago, Net Cash—			
No. 1	27.00	@	—
No. 2	25.00	@	—
No. 3	23.00	@	—
No. 4	23.00	@	—

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10	@	.60
Ledgers	.15	@	.40
Writings—			
Superfine	.15	@	.20
Extra fine	.12	@	.22
Fine	.20	@	.30
Fine, No. 2	.20	@	.25
Fine, No. 3	.15	@	.20
Book, M. F	.06	@	.09
Book, S. S. & C	.08	@	.15
Book, Coated	.08	@	.15
Coated Lithograph	.10	@	.15
Label	.08	@	.15
News	.05	@	.07
No. 1 Jute Manila	.12	@	.13
Manila Sul., No. 1	.08	@	.08½
Manila No. 2	.07½	@	.08
No. 2 Kraft	—	@	.08½
No. 1 Kraft	—	@	.09½
Common Bogus	.02½	@	.03
Straw Board	35.00	@	45.00
News Board	32.50	@	35.00
Chip Board	27.50	@	32.00
Wood Pulp Board (Carload Lots)	90.00	@	100.00
Binder Boards—			
Per ton	$65.00	@	$75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	48.00	@	50.00
Slaters	54.00	@	56.00
Best Tarred, 1-ply (per roll)	1.35	@	1.50
Best Tarred, 2-ply (per roll)	1.00	@	1.15
Best Tarred, 3-ply	1.50	@	1.65

Bagging

F. o. b. Phila.

Gunny No. 1—			
Foreign	.75	@	—
Domestic	.70	@	—
Manila Rope	4.00	@	4.50
Sisal Rope	.75	@	.80
Mixed Rope	.75	@	.80
Scrap Burlaps	1.00	@	1.25
Wool Tares, heavy	2.50	@	2.75
Mixed Strings	.75	@	.80
No. 1, New Lt. Burlap	.75	@	.80
New Burlap Cuttings	1.75	@	2.10

Old Papers

F. o. b. Phila.

Shavings—			
No. 1, Hard White	4.00	@	4.25
No. 2, Hard White	3.50	@	3.75
No. 1 Soft White	3.35	@	3.50
No. 2 Soft White	2.00	@	2.25
No. 1 Mixed	1.50	@	1.75
No. 2 Mixed	1.00	@	1.25

(Continued on page 66)

XUM

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JULY 22, 1922

SUMMARY

Wrapping Paper.....475 rolls, 203 bls.
Packing Paper.....596 rolls
Filter Paper .....40 cs.
Tissue Paper .....9 cs.
Printing Paper.....7 cs., 38 bls.
Wall Paper.....6 cs.
Paper Hangings.....10 bls.
Photo Paper .....2 cs.
Cigarette Paper.....110 cs.
Tracing Paper.....14 cs.
Miscellaneous Paper.....6,439 rolls, 384 bls.

CIGARETTE PAPER.

British American Tobacco Co., Adriatic, Liverpool, 14 cs.
British American Tobacco Co., Celtic, Liverpool, 34 cs.
Rose & Frank, Sarcoxie, Havre, 14 cs.
De Manduit Paper Corp., by same, 48 cs.

PHOTO PAPER

J. J. Ganin, Adriatic, Liverpool, 1 cs.
J. J. Ganin, Celtic, Liverpool, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Celtic, Liverpool, 5 bls.
W. H. S. Lloyd & Co., Menominee, London, 5 bls.

WALL PAPER

R. F. Downing & Co., Menominee, London, 6 cs.

PRINTING PAPER

B. F. Drakenfeld & Co., Celtic, Liverpool, 7 cs.
M. O'Meara Co., Caronia, Hamburg, 38 bls.

TISSUE PAPER.

C. H. Wyman Co., Adriatic, Liverpool, 7 cs.
F. C. Strype, by same, 2 cs.

FILTER PAPER

E. Fougera & Co., Homeric, Paris, 37 cs.
Eimer & Amend, Ryndam, Rotterdam, 2 cs.

PACKING PAPER.

Republic Bag & Paper Co., Ryndam, Rotterdam, 596 rolls.

WRAPPING PAPER

O. W. Miller & Co., Stockholm, Gothenburg, 17 rolls.
Corn Exchange Bank, by same, 28 rolls.
M. O'Meara Co., by same, 98 bls.
L. Glickman & Co., by same, 30 bls, 965 rolls.
L. Nyman & Sons., by same, 67 bls, 334 rolls.
Seggerman Bros., by same, 8 bls.

TRACING PAPER.

E. Dietzgen & Co., Mongolia, Hamburg, 14 cs.

PAPER.

M. O'Meara Co., Stockholm, Gothenburg, 74 rolls.
Coy, Disbrow & Co., Inc., by same, 10 bls.
Republic Bag & Paper Co., by same, 2,743 rolls.
Arkell Safety Bag Co., by same, 22 rolls.
Arkell Safety Bag Co., by same, 18 rolls.
Wilkinson Bros. & Co., Inc., by same, 2,734 rolls.
C. K. MacAlpin, by same, 766 rolls, 336 bls.
J. P. Hefferman Paper Co., by same, 100 rolls.
M. M. Cohen, by same, 38 bls.

RAGS, BAGGINGS, ETC.

G. M. Graves Co., Inc., Columbia, Glasgow, 126 bls. paper stock.
Irving Nat'l Bank, by same, 87 bls. rags.
Brown Bros. & Co., by same, 64 bls. paper stock.
E. J. Keller Co., Inc., Pr. Fillmore, Bremen, 840 bls. rags.
E. J. Keller Co., Inc., Schoharie, Hamburg, 60 bls. flax waste.
Katzenstein & Keene, by same, 25 bls. rags.
Katzenstein & Keene, Port Alma, London, 196 bls. baggings.
Castle, Gottheil & Overton, Schoharie, Hamburg, 104 bls. rags.
Castle, Gottheil & Overton, Chicago, Havre, 376 bls. rags.
Waste Materials Trading Corp., Ryndam, Rotterdam, 430 bls. paper stock.
Waste Materials Trading Corp., by same, 800 bls. shopperies.
Waste Materials Trading Corp., by same, 372 bls. baggings.
S. Silberman, by same, 193 bls. paper stock.
American Wood Pulp Corp., by same, 603 bls. rags.
Katzenstein & Keene, by same, 154 bls. rags.
Katzenstein & Keene, by same, 158 bls. baggings.
E. J. Keller Co., Inc., by same, 162 bls. paper stock.
E. J. Keller Co., Inc. by same, 49 bls. rags.
E. Butterworth & Co., Inc., Edgehill, Antwerp, 143 bls. bagging.
M. O'Meara Co., by same, 158 bls. bagging.
Irving Nat'l Bank, by same, 95 bls. bagging.
Northern Metals Selling Co., by same, 142 bls. rags.
Castle, Gottheil & Overton, by same, 856 bls. rags.
Waste Materials Trading Corp., by same, 305 bls. rags.
J. Perlman, Ulua, Havana, 2 bls. rags.
M. Wolfer, by same, 10 bls. rags.
M. O'Meara Co., Chickasaw, Hamburg, 71 bls. paper stock.
F. P. Gaskell Co., by same, 67 bls. rags.
Katzenstein & Keene, Inc., by same, 419 bls. rags.

OLD ROPE.

Katzenstein & Keene, Inc., City of St. Joseph, Barcelona, 180 bales.
Bemis Bros. Bag Co., by same, 28 coils.
Atlantic Nat'l Bank, Columbia, Glasgow, 60 coils.
Brown Bros. & Co., Bristol City, Bristol, 58 coils.
Brown Bros. & Co., Ryndam, Rotterdam, 68 coils.
J. C. Stallie & Co., by same, 180 coils.
N. E. Berzen, Galilee, Hull, 99 coils.
Brown Bros. & Co., by same, 50 coils.
J. Perlman, Ulua, Havana, 4 bales.

WOOD PULP.

A. J. Pagel & Co., Inc., Braheholm, Genle, 1,125 bales.
Johanesson, Wales & Sparre, Inc., Braheholm, Kiamfors, 5,400 bales.
M. Gottesman & Co., Inc., Honolulu, Stockholm, 3,000 bales.
M. Gottesman & Co., Inc., Schoharie, Hamburg, 701 bales.
R. F. Hammond, Honolulu, Stockholm, 500 bales, 100 tons.
Scandinavian American Trading Co., Stockholm, Gothenburg, 508 bales.
Johanesson, Wales & Sparre, Inc., by same, 758 bales.
Seggerman Bros., by same, 500 bales.
Niken, Lyon & Co., by same, 125 bales.
Whalen Pulp & Paper Mills, Ltd., Stanley Dollar, Vancouver, B. C., 9,690 bales, 1,384 tons.
Bulkley, Dunton & Co., Bremerton, Genle, 750 bales, 152 tons.
M. Gottesman & Co., Inc., by same, 1,524 bales, 304 tons.
A. J. Pagel & Co., Inc., by same, 625 bales, 76 tons.
Lagerloef Trading Co., Bremerton, Katka, 253 bls. wood pulp boards, 24 tons.
Bulkley, Dunton & Co., Santa Malta, 6,030 bls. wood pulp.
Bulkley, Dunton & Co., Bremerton, 750 bls. wood pulp.

WOOD FLOUR.

Hansa Co., Oropesa, Hamburg, 1,061 bags.

CASEIN.

Atterbury Bros., Jethon, Buenos Aires, 334 bags, 20,040 kilos.
Kalbfleisch Corp., by same, 834 bags, 50,040 kilos.
J. A. & N. Bird & Co., Southern Cross., Buenos Aires, 334 bags, 20,040 kilos.

PHILADELPHIA IMPORTS

WEEK ENDING JULY 22, 1922

Hudson Trading Co., Braheholm, Genle, 104 bls. wrapping paper.
Hudson Trading Co., Braheholm, Gothenburg, 306 rolls paper.
Paper Manufacturers Co., Inc., by same, 91 rolls and 10 bls. paper.
Paper House of Penna., by same, 90 rolls and 41 bls. paper.
Whiting, Patterson Co., Inc., by same, 550 rolls and 14 bls. paper.
Foreign Paper Mills, Inc., by same, 12 bls. paper.
Great Notch Paper Co., by same, 492 bls. paper.
Valeby, Sacuyler Paper Co., by same, 46 bls. paper.
Katzenstein & Keene, Inc., Chickasaw, Hamburg, 86 bls. rags.
Irving Nat'l Bank, by same, 236 bls. rags.
Katzenstein & Keene, Inc., Bacchus, Marseilles, 913 bls. rags.
Katzenstein & Keene, Inc., Sonora, Havre, 435 bls. rags.
Katzenstein & Keene, Inc., Schoharie, Hamburg, 33 bls. rags.
E. J. Keller Co., Inc., Themiste, Hamburg, 70 bls. old rags.
E. J. Keller Co., Inc., by same, 41 bls. new rags.
E. J. Keller Co., Inc., by same, 3 bls. jute cuttings.
E. J. Keller Co., Inc., by same, 63 bls. red rags.
E. J. Keller Co., Inc., Breiz Izel, Havre, 838 bls. rags.
E. J. Keller Co., Inc., Breiz Izel, Rouen, 420 bls. rags.
E. J. Keller Co., Inc., Schoharie, Hamburg, 218 bls. rags.
E. J. Keller Co., Inc., Edgehill, Antwerp, 55 bls. cuttings.
Castle, Gottheil & Overton, by same, 238 bls. rags.
Baring Bros. & Co., by same, 476 bls. rags.
Dill & Collins, Sinestern Miller, London, 206 bls. waste paper.
Equitable Trust Co., by same, 207 bls. waste paper.
Mechanics & Metals Nat'l Bank, by same, 277 bls. rags.
G. M. Graves Co., Inc., by same, 177 bls. rags.
A. J. Pagel & Co., Inc., Braheholm, Hosum, 3,000 bls. wood pulp.
A. J. Pagel & Co, Inc, Braheholm, Domsjo, 6,600 bls wood pulp
A J. Pagel & Co., Inc., Braheholm, Genle, 2,500 bls. wood pulp.
Johanesson, Wales & Sparre, Inc., Braheholm, Kiamfors, 1,800 bls. wood pulp.
Scandinavian American Trading Co., Braheholm, Iggesund, 3,600 bls. wood pulp.
Price & Pierce, Ltd., Braheholm, Gothenburg, 1,600 bls. wood pulp.

BUFFALO IMPORTS

WEEK ENDING JULY 22, 1922

Muder & Umlauf, Stockholm, Gothenburg, 521 rolls paper.
Muder & Umlauf, by same, 43 bls. paper.

BOSTON IMPORTS

WEEK ENDING JULY 22, 1922

E. J. Keller Co., Inc., Georgian, Hamburg, 33 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING JULY 22, 1922

R. F. Hammond, Honolulu, Gothenburg, 1,250 bls. wood pulp, 250 tons.
R. F. Hammond, Mexicano, Gothenburg, 1,750 bls. wood pulp, 350 tons.
A. J. Pagel & Co., Inc., Bremerton, Genle, 1,250 bls. wood pulp, 254 tons.
Guaranty Trust Co., Bremerton, Sikea, 4,200 bls. wood pulp, 711 tons.
Bulkley, Dunton & Co., Swichco, 15,358 bls. wood pulp.

TAYLOR, BATES & CO.

Members New York Stock Exchange
Members New York Cotton Exchange

100 Broadway, New York
Tel. Rector 1140

BONDS STOCKS COTTON	Bought and Sold on Commission

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of Frovifors excellent quality

May we send you samples and quotations?

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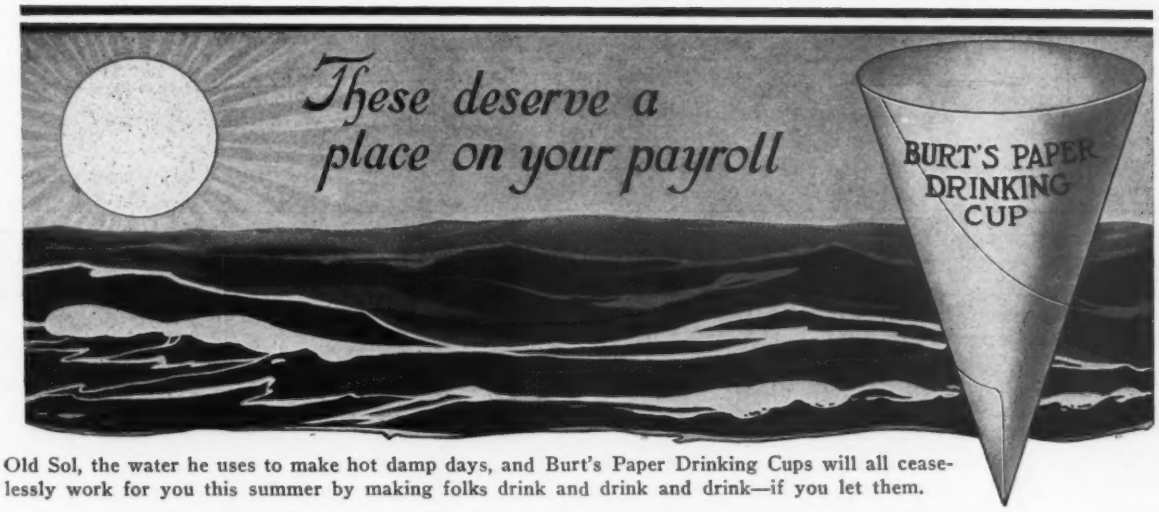

Old Sol, the water he uses to make hot damp days, and Burt's Paper Drinking Cups will all ceaselessly work for you this summer by making folks drink and drink and drink—if you let them.

Burt's Paper Drinking Cups For Particular People

Snow white of fine paper.
No wax to make drink taste.
No bottom to fall out.
Nor to set aside on.
No animal glue used.

One-at-a-time dustproof dispenser.
Of ample capacity.
No opening up and soiling.
Drinking edge untouched by hands before use.

Trebly reinforced to make holders unnecessary.
Lowest in cost.
Holds hot drinks.

You can sell such cups to particular people who stay sold and repeatedly come back for more—at a good profit to you.

F. N. BURT COMPANY, Ltd., Paper Cup Division, Buffalo, N. Y.

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
TUESDAY, July 25, 1922.

ALUM.—Summer appears to have calmed the tone of the alum market, and while the quoted prices hold steady at 3.50 cents a pound for lump, 3.65 for ground and 3.90 for powdered, transactions involve but small quantities.

BLEACHING POWDER.—Bleach is still practically a minus quantity in so far as its influence on the chemical market is concerned due to the extreme scarcity of the commodity. A nominal price of 1.60 cents a pound is named by merchants but all existing stocks have been pretty thoroughly wiped out.

BLANC FIXE.—This product is moving regularly but slow as uyebrs are not exhibiting any too much interest in the market. Prices quoted are from $37.50 to $45 for blanc fixe pulp and 3.50 to 3.75 cents a pound for the dry.

CASEIN.—With the stimulated domestic production of casein, some of the strain, resulting from a topheavy demand and scant supplies, has been lightened. Argentine casein is in strong demand and manufacturers of fine coated papers are paying high prices for what little of the commodity is available. Dealers are quoting prices that range from 11.00 to 14.00 cents a pound.

CAUSTIC SODA.—Location of the plant determines the variation of 3.10 and 3.25 cents a pound which is given on caustic. Demand is fair at the spot price of 2.50 cents a pound for 60 per cent.

CHINA CLAY.—Larger importers of China clay state that the excellent demand for the commodity in this country has caused English producers to turn their dry stocks, great quantities of the wet stocks on the ground having been sold for future shipment. Imported is quoted at $14 to $22 per ton, domestic washed at $7 to $10 and unwashed at $5.50 to 8.

LIQUID CHLORINE.—The difficulty of storing chlorine in warm weather has held down tank car orders even at the low quotations of 4.25 to 4.50 cents a pound. There has been but slight activity in the sale of chlorine in cylinders of 100 pounds, quoted from 4.50 to 7.00 cents.

ROSIN.—Slight competition together with a fairly steady demand has served to solidify rosin prices at the present figure of $5.20 per barrel on grades E, F, and G, Savannah, Ga. New York prices average $1 per barrel more than this.

SALTCAKE.—This commodity is about as scarce as bleaching powder at the present time, and due to slack acid production, will probably remain so until fall. Chrome cake is quoted at $18 to $19 a ton while acid cake ranges from $20 to as high as $24 and $25, the last named price being exceptional, however.

SATIN WHITE.—No movement of importance has been registered in the satin white market in recent weeks and quotations hold steady at 1.50 to 2.00 cents a pound.

SODA ASH.—Although further orders are coming in slowly, producers of soda ash report steady withdrawals on contract. Quoted prices on this basis are $1.51 per cwt., works.

SULPHUR.—Still moving regularly, sulphur continues to be quoted at $18 to $20 per ton.

STARCH.—Starch is now quoted at the slightly stiffer price of 2.47 and 2.57 cents a pound for pearl and paper maker's grades respectively in bag quantities and 2.75 and 2.85 in barrels.

SULPHATE OF ALUMINA.—Demand is very good for aluminum sulphate plants are operating capacity to supply water filtration companies and paper manufacturers. Plain sulphate is quoted at 1.40 to 1.50 cents a pound with iron free at 2.15 to 2.35 cents.

TALCUM.—Dealers in this commodity report a regular activity in the market, prices having a firm tone at the quoted $15 to $17 a ton.

Market Quotations

(*Continued from page 63*)

Solid Ledger Stock.	2.25	@	2.50
Writing Paper.....	1.80	@	2.00
No. 1 Books, heavy.	1.60	@	1.75
No. 2 Books, light.	1.40	@	1.50
No. 1 New Manila.	2.75	@	3.00
No. 1 Old Manila..	1.50	@	1.75
Container Manila..	1.00	@	1.10
Old Kraft.....	2.00	@	2.25
Overissue News....	.75	@	.80
Old Newspaper....	.50	@	.60
No. 1 Mixed Paper.	.45	@	.50
Common Paper....	.40	@	.50
Straw Board, Chip.	.40	@	.45
Binders' Bd. Chip.	.40	@	.45

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.10	@	.10¼
New White, No. 2	.05½	@	.06½
Silesias, No. 1....	.05½	@	.06
New unbleached..	.09	@	.09½
Washables	.03½	@	.03¾
Fancy	.04¼	@	.04¼
Cottons—according to grades—			
Blue Overall.....	.04½	@	.05¾
New Blue.....	.02	@	.02¼
New Black Soft.	.03	@	.03¼
New Light Seconds.....	.02	@	.02¼
Khaki Cuttings...	.02¾	@	.03¼
Corduroy	.02	@	.02½
New Canvas.....	.07	@	.07¼
New Black Mixed	2.75	@	3.00
Old White, No. 1—			
Repacked	.06	@	.06½
Miscellaneous ...	.04½	@	.04¾
White, No. 2—			
Repacked	.03	@	.03½
Miscellaneous ...	.02½	@	.02¾
Thirds and Blues—			
Repacked	1.65	@	1.80
Miscellaneous ...	1.40	@	1.55
Black Stockings....	1.75	@	2.25
Roofing Stock—			
No. 1.....	1.00	@	1.10
No. 2.....	.90	@	1.00
No. 3.....	.80	@	.90
No. 4.....	.80	@	.90
No. 5A.....		nominal	
B.....		nominal	
C.....		nominal	

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.06¼	@	.60
Ledgers	.07½	@	.35
Writings	.07½	@	.22½
Superfine	.15	@	.22½
Fine	.15	@	.18
Books, S. & S. C...	.07	@	.10
Books, M. F.....	.05¾	@	.07½
Books, coated	.08	@	.10
Label	.08½	@	.09½
News sheets	3.75	@	—
News, rolls	3.50	@	—
Manilas—			
No. 1 Manila ...$6.75		@	
No. 1 Fibre	.07½	@	—
No. 1 Jute.....	8.50	@	8.75
Kraft Wrapping ...	.06¼	@	.07
Common Bogus ...	3.00	@	

Boards

(Per Ton Destination)

Chip	$35.00	@	37.50
News, Vat Lined...	36.50	@	38.50
Wood, Vat Lined..	47.25	@	
Filled News Board..	37.50	@	
Solid News Board..	42.00	@	45.00
S. Manila Chip....	52.50	@	
Pat. Coated.....	70.00	@	75.00

Old Papers

Shavings—			
No. 1 Hard White	3.70	@	3.90
No. 1 Soft White	3.30	@	3.45
No. 1 Mixed....	1.50	@	1.75
Ledgers & Writings	.03½	@	—
Solid Books	1.85	@	2.10
Blanks	1.30	@	1.45
No. 2 Books Light.	.60	@	.70
Folded News, overissues $11.25		@	12.50
Gunny Bagging....	.70	@	.75
Manila Rope.....	4.25	@	4.50
Common Paper.....	.50	@	.60
Old News.....	.55	@	
Old Kraft.....	1.75	@	1.80

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted.....	.12	@	.13½
Dark tinted.....	.13½	@	.15
Ledgers (sulphite).	—	@	.13
Writing	.10½	@	.13¼
News, f. o. b. Mills—			
Rolls (carloads).	3.50	@	
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.50
Book—			
No. 1 M. F. (carloads)	9.50	@	—
No. 2 M. F. (carloads)	8.50	@	—
No. 3 M. F. (carloads)	8.00	@	—
No. 1 S. C. (carloads)	10.00	@	—
No. 2 S. C. (carloads)	9.00	@	—
No. 1 Coated and litho.	14.00	@	—
No. 2 Coated and litho.	13.00	@	—
No. 3 Coated and litho.	12.25	@	—
Coated and litho., colored	14.25	@	—
Wrapping—			
Grey	4.50	@	—
White Wrap	5.00	@	—
"B" Manila	5.50	@	—
No. 1 Manila ..	6.75	@	—
Fibre	6.75	@	—
Kraft, M. F.	8.00	@	—
M. G.	8.15	@	—

Pulp

(F. o. b. Mill)

Ground wood....$27.50		@	35.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade.	50.00	@	60.00
Sulphite, bleached..	90.00	@	95.00
Sulphate	70.00	@	

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut..	3.75	@	—
Soft White Book Shavings	3.40	@	3.45
White Blk News	1.70	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.70	@	—
Light and Crumpled Book Stock	1.55	@	—
Ledgers and Writings	1.95	@	—
Solid Ledgers....	1.95	@	—
Manilas—			
New Manila Cut.	1.70	@	—
Printed Manilas..	.90	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News....	.80	@	—
No. 1 Mixed Papers	.60	@	—

Domestic Rags—
Price to mills, f. o. b. Toronto
Per lb.

No. 1 White shirt cuttings	.10¾	@	.11
No. 2 White shirt cuttings	.05½	@	.05¾
Fancy shirt cuttings	.05	@	.05½
No. 1 Old whites	.04	@	—
Thirds and blues	.02	@	.02½

Per cwt.

Black stockings..	2.00	@	2.25
Roofing stock:			
No. 1.....	1.35	@	—
No. 2.....	1.20	@	—
Roofing stock:			
Manila rope	.05¼	@	.05¾
No. 2.....	.01½	@	—
Gunny bagging....	1.00	@	1.25

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132ND TO 133RD ST. & BROOK AVE

PAPER BAGS

Sacks and Specialties

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SCHORSCH & CO.

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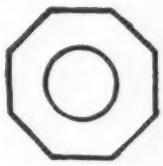

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To Give Entire Satisfaction

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Mills:
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Sales Office:
527 Fifth Ave., New York

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PERFORATED METALS

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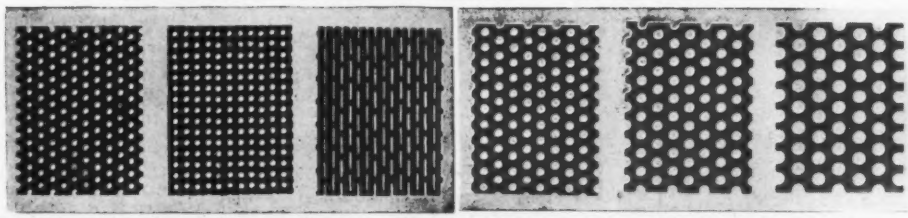

All kinds and thicknesses of Metal

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618 No. Union Ave., Chicago, Ill., U. S. A. New York Office, 114 Liberty St.

XUM

WANT AND FOR SALE ADVERTISEMENTS

CLASSIFIED RATES

Minimum rate for advertisements of 25 words or less, first insertion, $1.00.

SITUATION WANTED, 4 cents a word for first insertion and 2 cents a word for each subsequent insertion of same ad. No ad of less than 25 words accepted.

HELP AND MISCELLANEOUS WANTS, and small For Sale Ads, 4 cents a word for each and every insertion. No ads of less than 25 words accepted.

When answering advertisements, please address the Box Number given in ad.

Answers can be forwarded care Paper Trade Journal, and will be promptly forwarded without extra charge. All should be sent to the New York office, 10 East 39th street. And all should be addressed as the advertisement directs in every case and not simply to the paper.

All classified ads for the current issue must be in hand not later than Monday preceding date of publication.

HELP WANTED

WANTED—A calender man. New York City position. Address, Box 5277, care Paper Trade Journal Jy-27

WANTED—By Import and Domestic Paper Jobbers, located in Toronto, agencies for high grade paper products. Address, Box 5278, care Paper Trade Journal J-27

PRACTICAL and experienced paper board man. Must be experienced on all grades of board and general upkeep of entire plant. Knowledge of handling labor positively necessary. Best living conditions within short distance of plant. Address, Box 5279, care Paper Trade Journal. J-27

BAG MACHINE ADJUSTER on flat and square glassine specialties. Must be thoroughly familiar with machine printing. Excellent opportunity for an energetic, conscientious man with an eye to production. References required. Answer by letter to Box 5280, care Paper Trade Journal J-27

WANTED—A salesman who commands a good trade. We have stock in New York and really good mill connections in all kinds of white paper for big business. If you are such a man we will give you a good proposition. You must state full particulars. Address, Box 5281, care Paper Trade Journal. J-27

WANTED—First class machine tender and back tender for .009 straw, 90" cylinder machine. Seventy and fifty-two and a half cents per hour respectively. Two tours. Fine modern mill. Good town. Address, Box 5283, care Paper Trade Journal J-27

WANTED—Night superintendent for waxed paper plant in the middle west. Must be experienced in bread wrapper work. Good permanent position. Address, Box 5284, care Paper Trade Journal A-17

WANTED—Capable and reliable millwright. Must be a hustler. Steady work. Mill located in New Jersey. Address, Box 5285, care Paper Trade Journal. J-27

WANTED

MASTER Mechanic for two machine writing mill in good size middle west city. In application state age, experience and references. Address, Box 5282, care Paper Trade Journal. A-10

HELP WANTED

SUPERINTENDENT WANTED—For binder board mill located in Middle West. Must be fully experienced and able to show satisfactory daily productions and quality. Must have A-1 references which will be considered confidential. Write Box 5288, care Paper Trade Journal, and state what your experience has been. J-27

WANTED—Experienced Potdevin Automatic Bag Machine Adjusters; also old style square and flat, and experienced balers. All applicants must state previous experience and salary expected. Send all communications to Consolidated Paper Bag Company, 125 Merrimac Street, Boston, Mass. tf

WANTED—Experienced man with investment to connect himself permanently with paper stock company on Pacific Coast and take over management of Los Angeles plant. Write fully stating experience, salary expected, contemplated investment, etc. All correspondence confidential. Address, Box 5261, care Paper Trade Journal. A-10

WANTED—District Salesmen on a commission basis to take on an important line in New England, New York, Pennsylvania and New Jersey, Michigan, Wisconsin and Minnesota and the far west. We can only consider those who already have an established trade and who cover their territory frequently. Address, with full details, Box 5262, care Paper Trade Journal. J-27

WANTED—Married man for plant Superintendent. One who is familiar with manufacturing pulp products, with certain knowledge of paper mill machinery and equipment, capable of handling men and women with mechanical ability, and production producer. State experience and salary. Address, Box 5263, care Paper Trade Journal. A-3

SUPERINTENDENT WANTED by modern progressive mill located in Middle Wesct. Must be fully up to date on cylinder tissue, have some knowledge of converting, be good at handling help. Man not over 35 years old preferred. Applicant must state age, past and present connections, salary now receiving if employed and other information considered of interest to a prospective employer. **Address, Box 5192, care Paper Trade Journal.** tf

WANTED—A night foreman in two machine Kraft mill. Please state experience and wages desired. Address, Box 5242, care Paper Trade Journal. J-27

WANTED to correspond with able paper distributors in Middle West to handle output of small plant making Filter Paper, Rope and Manilas. Special inducement offered. Address, Box 5245, care Paper Trade Journal. J-27

WANTED—Man capable of supervising Fibre Container factory equipped with most modern machinery. Experienced man preferred. Address, Box 5246, care Paper Trade Journal. tf

WANTED—Two good Backtenders by mill in the Middle West running on plain chip and specialties. Address, Box 5264, care Paper Trade Journal. A-3

WANTED AT ONCE

for box board mill, two first class beatermen. two first class backtenders, give age, references, experience and where last employed in first letter. National Paper Products Co., Stockton, California. A-3

HELP WANTED

WANTED—Master Mechanic, capable of taking entire charge of repair crews in a large up-to-date box board mill in middle west. None but a hustler and live wire considered. References required. Address, Box 5265, care Paper Trade Journal. A-3

BEATER ENGINEER, one familiar with Chipboard, test liner and folding box board. Must be good on beater colors and be able to handle help in an efficient manner. Address, Box 5266, care Paper Trade Journal. A-3

WANTED:

Master Tissue Paper Crepers who fully understand the art of creping lightweight tissues for napkins. A splendid and exceptional opportunity is offered to the right men. When replying please furnish full details of your past experiences, etc. Independent Paper Mills, Inc., 68 Thirty-fifth Street, Brooklyn, New York. tf

SITUATIONS WANTED

YOUNG MAN, age 30, seven years experience paper line, four selling. Well acquainted with New York Trade, also mills. Open for engagement with reliable fine paper jobber or mill agent. Either in selling or executive capacity. Address, Box 5286, care Paper Trade Journal. A-10

MECHANICAL ENGINEER and master mechanic is open for employment. Has long experience in pulp and paper mills and has advised changes which have greatly improved the output with small costs. If your machines or any part of mill is not up to its production, let me give you my experience at small cost. Address, Box 5287, care Paper Trade Journal. A-3

MILL MANAGER thoroughly experienced in the manufacture of ground wood, sulphite, wrapping paper, news and board. Cost accounting, purchasing and sales experience. Now employed, desires new connection. Good references. Address, Box 5289, care Paper Trade Journal. A-3

SITUATION WANTED—Sheet calender man would like steady work running sheet calenders. Ten years' experience running light and heavy weight linen ledgers and bond papers. Address, Box 5290, care Paper Trade Journal. A-10

SALES MANAGER—Man 40, college education, thoroughly experienced as salesman, wishes to make connection with firm desiring a sales or district manager. Have wide experience in selling beater room equipment and knives. Large following among paper mills in Eastern Penna. Address, Box 5270, care Paper Trade Journal. A-10

SULPHATE PULP SUPERINTENDENT, or Assistant, with proven ability, desires connection with mill having production trouble. Nine years' experience in the U. S. and Canadian mills. Best of references. Address, Box 5276, care Paper Trade Journal. A-17

MILL CONNECTION WANTED for the Greater New York territory and vicinity, by selling organization in touch with the large buyers and users of paper. M. F. Super, Coated, Litho Coated, Bond Kraft or News Print, preferred. Have ample capital to finance large volume of business. Eastern Mill preferred. Address, Box 5258, care Paper Trade Journal. A-10

XUM

SITUATIONS WANTED

SITUATION WANTED by young, competent all around office man. Have had several years' of experience and worked up from the bottom and is now head of pulp and paper industry accounting staff. Thoroughly familiar with voucher system and Elliott Fisher bookkeeping records. Good reference. Write fully first letter. Address, Box 5272, care Paper Trade Journal. J-27

ASSISTANT MANAGER wants position. College graduate. Six years' experience in one of the largest pulp and paper mills on continent. Thoroughly familiar with office and shop practices and management. Recognized leader and organizer. Address, Box 5273, care Paper Trade Journal. J-27

$6,000 OFFICE MANAGER, Sales, Credits, Purchases, Costs, etc., seeks new connection. Highest references given. Address, Box 5259, care Paper Trade Journal. A-3

MECHANICAL DRAFTSMAN, 16 years' technical and practical experience on construction and operation of Sulphite Ground Wood and Newspaper Mills. Open for position. Address, Box 5271, care Paper Trade Journal. J-27

SITUATION WANTED—A one hundred per cent American, between 35 and 40 years old, married, and at present employed. Have had nineteen years' experience in the Paper Industry, holding only executive positions. Thoroughly acquainted with the details of manufacturing, operating and financing a plant. Securing a salary is not the vital point, but locating with a concern where there is a future is the objective. Address, Box 5291, care Paper Trade Journal A-3

PAPER LINE—Man available. Fifteen years' experience with large paper converter, desires position in sales end paper mill or jobbing line; would consider part interest in established jobbing house. Best references. Address, Box 5252, care Paper Trade Journal. A-3

EXPERIENCED SALESMAN—Fine papers, desires position to sell Chicago and Central West jobbers. Address, Box 5253, care Paper Trade Journal. A-3

WANTED—Superintendent of twenty years' experience as practical papermaker is open for position in news line. Address, Box 5248, care Paper Trade Journal. J-27

WRAPPING PAPER MANUFACTURERS

Manufacturers' agent, located in New Orleans, permanently established, well and favorably known to the larger jobbers in Louisiana and Texas, desires to represent, on a commission basis, manufacturers of Wrapping Papers, and both D. F. and W. F. Fibres. Address Box 5292, care Paper Trade Journal. A-10

The Want Columns
of the
Paper Trade Journal
are
Result Getters

TRY THEM

SITUATIONS WANTED

MAN EXPERIENCED IN PAPER MILL ACCOUNTING, costs, office management and administrative problems, seeks position with progressive firm. Address, E. J. B., P. O. Box 760, Cincinnati, Ohio. A-3

A MAN thoroughly competent to run Calender and Press Roll Grinding Machine and able to determine Crowns desired. Wishes permanent or temporary work. Address, Box 5197, care Paper Trade Journal. Ag-3

WANTED: By a New York Manager and Representative of an out of town Manufacturer of Toilet Paper and Paper Towels, similar connection with reputable manufacturer. Have been in the line over 20 years, over 15 years of which I have spent with my concern. Address, Box 5114, care Paper Trade Journal. Jy-27

KRAFT PULP MILLS—Tonnage is what you want. Get in touch with the man who can give it you at the right cost. Address, Box 5269, care Paper Trade Journal. J-27

FOR SALE

FOR SALE reasonable. Two Reeves variable speed transmission, size No. 3, range 2 to 1; Buffalo blower No. 4 and four calender rolls 50" x 4¼". All used only three months and in perfect condition. Address, Box 5293, care Paper Trade Journal. J-27

FOR SALE—Double patent coated white cardboard Offcuts running from 5" to 9" in width of different lengths. Cheap. High grade quality. Address, Mill Dept. Rose Lithographic Corporation, 55 33rd Street, Brooklyn, New York. A-17

WANTED—Four ft. barker, either "Green Bay" or other equally good machine. Address, Box 5275, care Paper Trade Journal.

FOR SALE—One No. 10 Reeves Variable Speed Transmission. Brownville Board Co., Brownville, N. Y. A-10

FOR SALE—1 small Jordan Engine. 6 Farnum Drives. Complete Triple-Deck frames for 44 dryers. Will arrange terms to suit. Chesapeake Paper Board Co., Baltimore, Maryland. tf

FOR SALE

2—Chilled Calender Rolls 12" diameter, 88" face.
1—3-drum Downingtown Reel.
2—Wilbraham-Green Vacuum Pumps.
1—36" Diameter, 92" Face Cylinder Mold.
1—Claflin Engine, with new filling.
1—200 H.P. General Electric Motor. (Used two months.)
1—14x36 Cooper-Corlies Engine.
1—15¼x27 Buckeye Engine.

In order to move, will quote very attractive price. Address, Box 177, Coshocton, Ohio J-27

MISCELLANEOUS

WANTED—Six dryers, 36" diameter, 86 to 92" face. Also seven roll stack of calenders, 90" face. California-Oregon Paper Mills, Los Angeles. A-3

W. H. VILLIERS, lately of Three Rivers may hear of something to his advantage by sending his address to Box 5294, care Paper Trade Journal. J-27

WANTED—Five second hand dryers, 72" by either 30, 36, or 48" in diameter, together with frames. Must be in good condition. Address, Box 5295, care Paper Trade Journal. A-3

SWIFT, GEORGE W., JR., Designer and Manufacturer of Special Machinery for Manufacturing and Printing Paper Goods. Bordentown, N. J. 8-24-22

MISCELLANEOUS

SHARTLE

can fill your requirements in used or new machinery.

THE SHARTLE BROTHERS MACHINE CO.
Middletown Ohio

TF.

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About 35,000,000 Kilowatt Hours per year available at Tonawanda, or North Tonawanda, New York.

Will make attractive rate to anyone who can utilize this power.

Location at the foot of navigation of the Great Lakes and the Western Terminus of the New York State Barge Canal.

Rail transportation facilities unsurpassed. Labor and Living Conditions Good.

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Rebuilt Paper Mill Machinery

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FOURDRINIER TISSUE MACHINE—One 96", one 68".
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PRESS PARTS FOR PAPER MACHINES—Pusey & Jones bell crank housings with rolls 18"x117", Black & Clawson swing arm housings with rolls.
DRYERS—Four 48"x111", thirteen 36"x95", four 48"x68", one 84"x67", eleven 42"x66".
CHILLED CALENDERS—One 72" five roll; one 66" five roll; one 54" five roll; two 58" six roll.
DILLON DOCTORS—For Machine Calenders 60" to 120" face.
SLITTERS AND WINDERS—One 120" Warren, one 108", 36" Kidders.
REELS—Pusey & Jones two drum upright 48" to 114".
BEATERS—Five 72"x42" Noble & Wood; one Dilts 62"x50" iron tub; one Jones 62"x52"; seven Horne 36"x36"; three Downingtown iron tub 54"x42"; one Dillon 60"x48" wood tub; one Dilts 50"x42" wood tub; one Emerson 53"x52", wood tub. Two No. 2 Claflins, two No. 1 Claflins. Two Emerson 54"x60" wood tub.
JORDANS—One Wagg Majestic, two No. 2 Dillon Improved, one Large Horne, three Monarch, one Jones Standard, two Pope Brushing Engines.
SCREENS—One 12 plate, six 10 plate open side Packer, two 6 plate, one Moore & White auxiliary.
STUFF PUMPS—Deane triplex 9"x8", Gould triplex 8"x10", Sandusky triplex 4"x6", 2—6" post.
REVOLVING SHEET CUTTERS—Five 61" Hamblet, four 61" Finlay, one 50" Hamblet diagonal, one 42" Finlay.
REAM CUTTER—One 48" Acme.
SUPER CALENDERS—One 45", one 42", one 36" Holyoke.
WET MACHINES—Four 72" Bagley & Sewall Hydraulic, 1—52".
ROTARY BOILERS—Two 8'x20'.
One Manistee Hog Chipper.
We have a large number of pumps and over five hundred calender, press and couch rolls in stock.

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175 Richdale Ave., Cambridge 40, Mass.

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Only 100 miles west of Chicago. Two Paper Machines 100,000 lbs. per day production of various grades of boards. Railroad sidings at the mill. 650 H. P. water power. Up to date and complete.

The reason this Mill is offered for sale is because only part of present stockholders are consumers of board. They own majority of stock and are willing that either mill be sold outright or to retain their holdings and arrange for sale of 50% interest, preferably to some other consumer of board.

Price and terms reasonable and the opportunity is yours!

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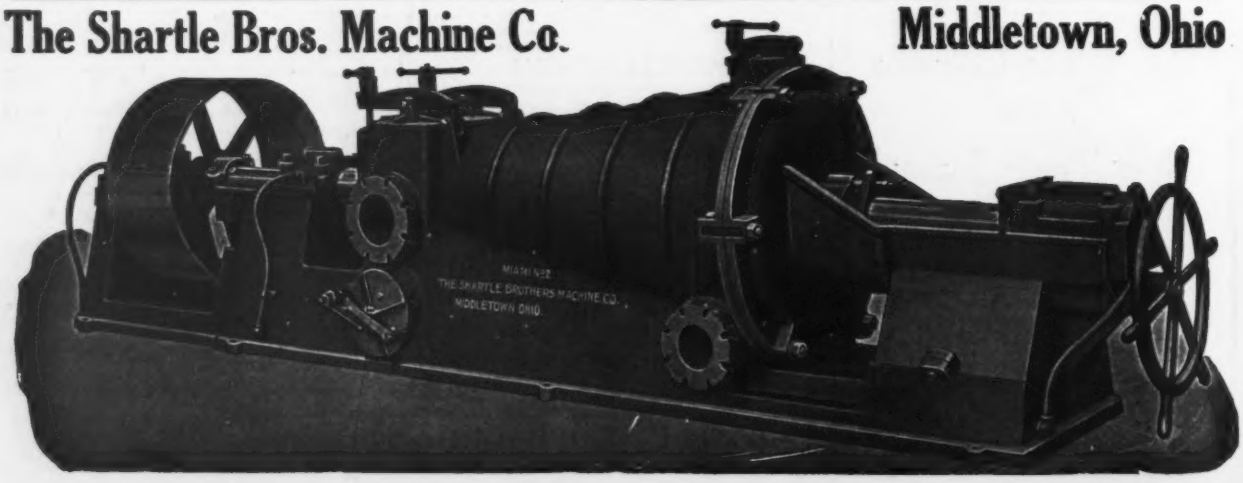

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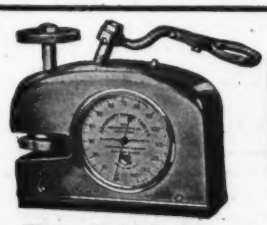

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Actual necessities for all those who make, sell or purchase paper in any form. The thousands in daily use testify to their efficiency.
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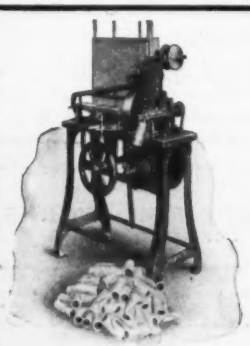
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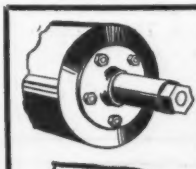

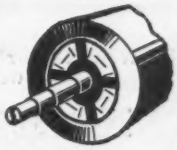
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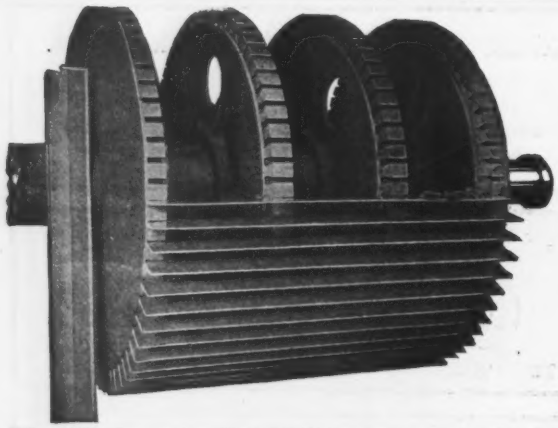

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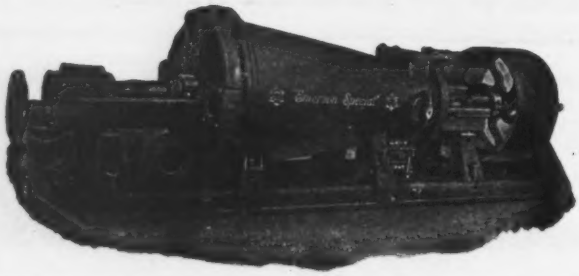

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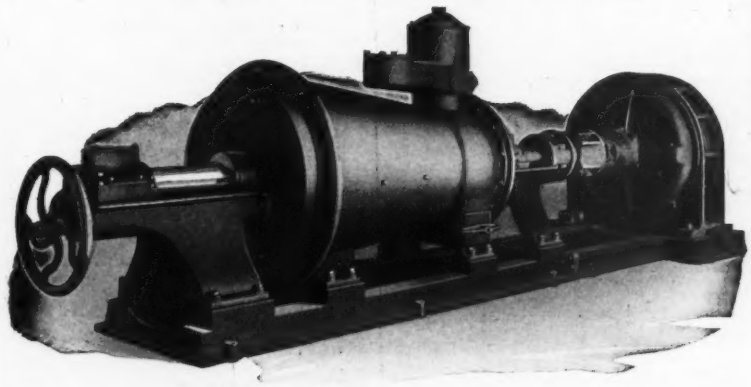

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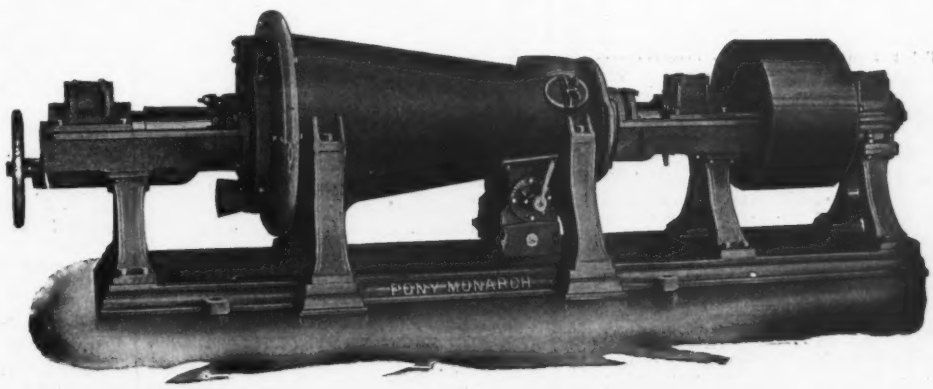

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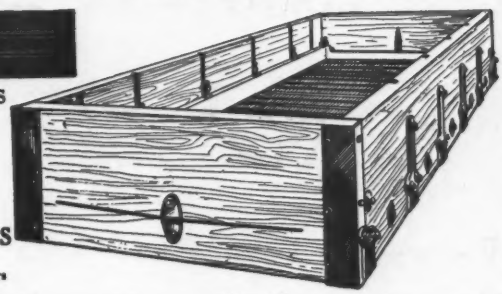

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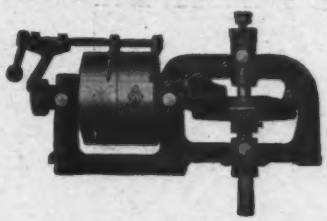

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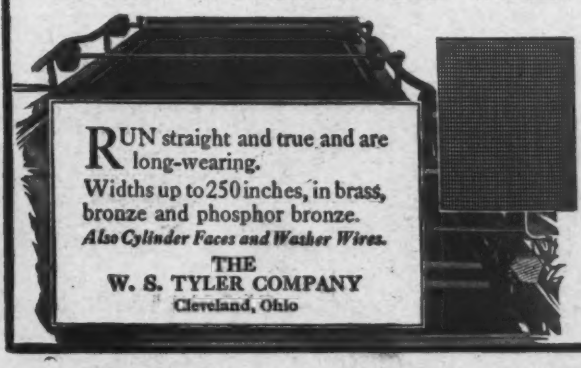

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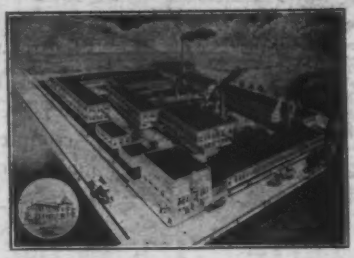

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